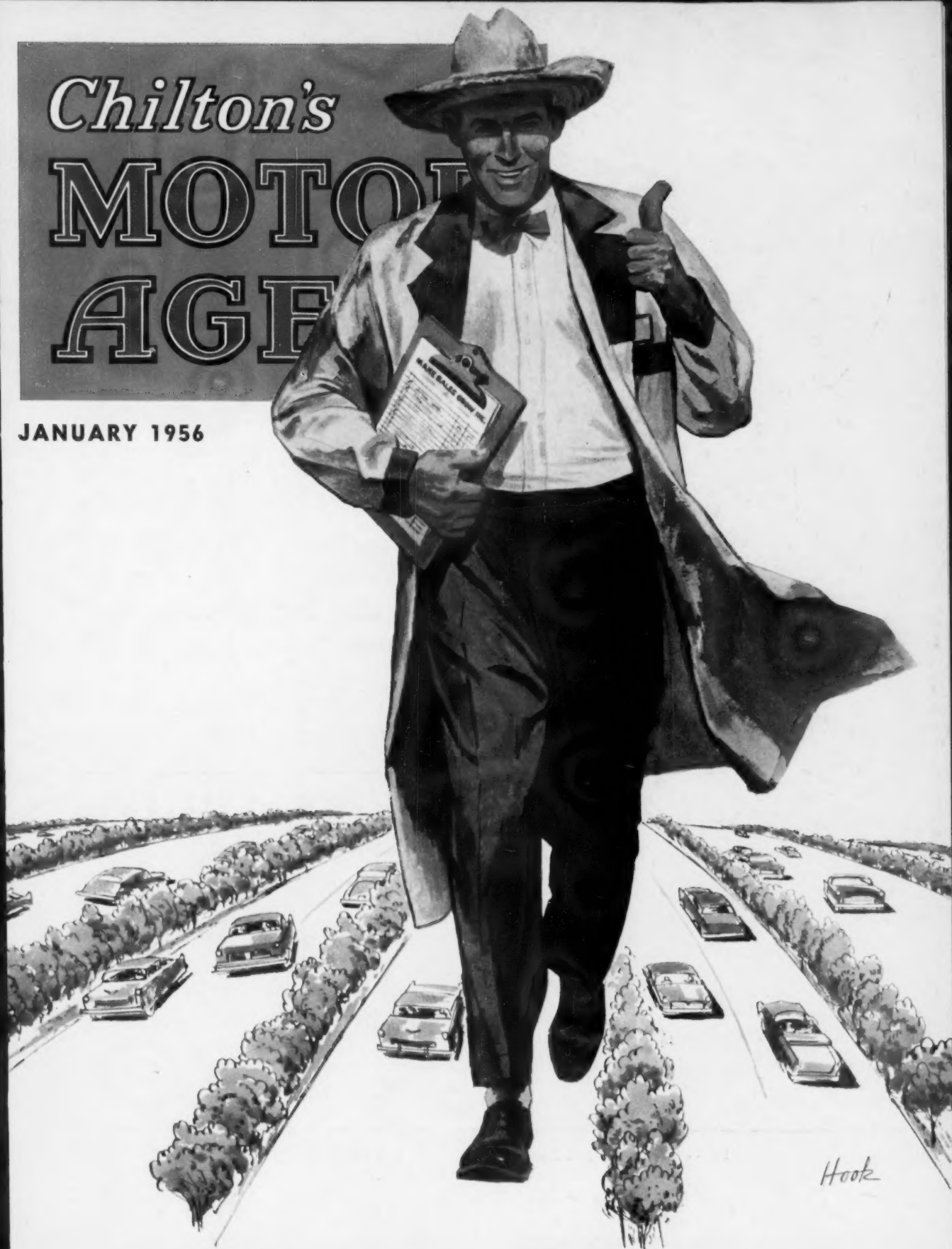
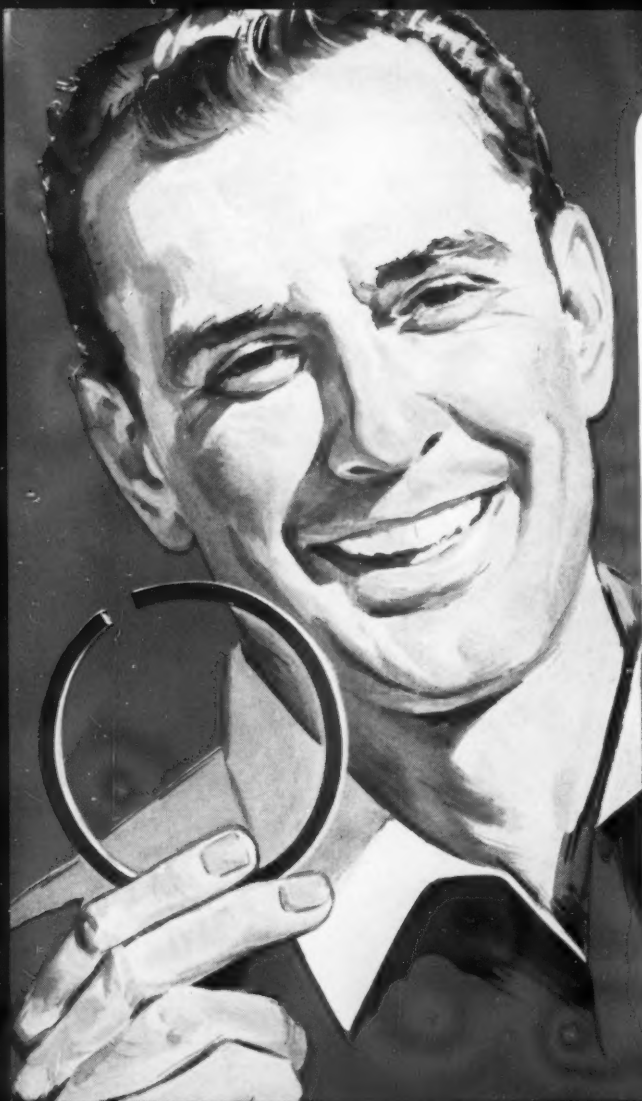


Chilton's MOTOR AGE

JANUARY 1956



Jobber Executive Edition — follows page 32



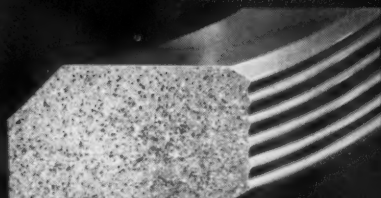
To the mechanic who is PROUD of his ring jobs!

There's more reason to be proud
when you install

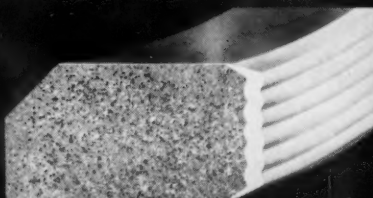
Sealed Power KromeX RING SETS!

Whether it's a passenger car, truck,
or bus, it will start easier, break in
faster, save more oil, and travel
more thousands of miles more
economically with Sealed Power
KromeX Ring Sets!

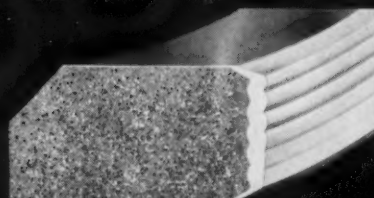
HERE'S PART OF THE REASON:



A good chrome ring must be a good
ring before the chrome is applied.
This Sealed Power ring of chrome-
alloy cast iron has the face especially
machined for permanent bonding of
solid chrome, with oil-retaining
grooves for better lubrication.



The solid chrome face is plated on by
Sealed Power's own special process,
to an actual average thickness of
.004—so firmly bonded that it can
never flake off to damage cylinder
walls. Note the oil-carrying grooves
after plating.



After plating, every Sealed Power
Chrome Ring is factory-lapped to a
light-tight finish for quick seating and
instant oil control. No waiting for
hundreds of miles for rings to break in.
This lapping equals 300 to 500 miles
of actual road wear.



SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST FOR RE-RING! BEST FOR RE-BORE!

Sealed Power Motor Parts—The Heart of the Engine • Rings, Pistons, Pins, Sleeves, Valves, Water Pumps

BIGGEST, MOST PROFITABLE PERMATEX DEAL EVER!

THIS LUXURIOUS CHATHAM BLANKET
YOURS FREE

with the purchase
of any **4 cases**
of these fast-moving

PERMATEX Cooling System Products

No. 77L Cooling System Cleaner and Conditioner

No other product like it—a complete cooling system service in one package. Cleaner (in top of can) cleans out rust and scale—dissolves oil and grease. Conditioner (in bottom) stops rust reforming—stops leaks and seepage. Quick and easy to use—one less flush than with other products.



No. 18E Heavy Duty Radiator Cleaner

A liquid cleaner for badly neglected cooling systems. Quickly dissolves rust, scale, lime—completely restores radiator circulation.



No. 76M Radiator Sealer (liquid)

Stops leaks and seepage in radiators, pump connections, and water jackets. Compatible with all anti-freezes.



No. 40D Block and Head Sealer

Effectively seals cylinder cracks, split valve seats and parts, and cracks in water jackets and cylinder heads.

No. 38M Water Pump Lubricant and Radiator Anti-Rust

Here's a "must" for every cooling system job. One can in the radiator affords full protection. Lubricates water pump parts—eliminates noise—reduces wear—prevents further rust and scale deposits.



Warm, soft, luxurious, these Chatham blankets are double-bed size—a nylon-rayon blend in beautiful new decorator colors. You'll be proud to have one in your home.

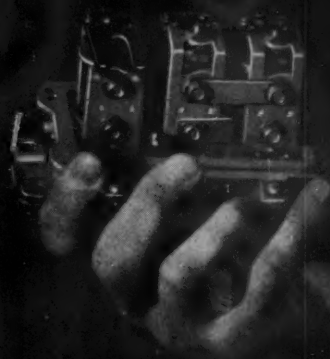
Order from your jobber, or write to Permatex, giving jobber's name, now!

PERMATEX COMPANY, INC., BROOKLYN 35, N. Y. • KANSAS CITY 15, KANS.

More Than 50 Chemical Products for Better Automotive Maintenance



'The
voltage
regulator was
loaded with
clues.'



LOOK IN THE VOLTAGE AND CURRENT UNITS FOR:

1. BURNT POINTS — Look for high resistance, bad ground in charging system.

2. OVERHEATED CONTACT SPRINGS — Look for crossed connections on regulator; shorted wiring, field coils.

3. BURNT WINDINGS — Look for open circuit (broken connection) or very high resistance in charging system.

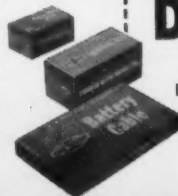
4. DIRTY OR OXIDIZED POINTS — Insufficient maintenance. Needs cleaning like ignition contact points.

5. For more clues, send for **BLUE STREAK SERVICE BULLETIN 81-55**. See address below!

"When something goes wrong in the charging system," cautions all-seeing Sherlock McKanick, "it leaves its mark on that innocent victim, the voltage regulator. Therefore, the regulator is very often loaded with clues which will point to the culprit. Above are four clues that show how damage to the regulator can lead you to the actual scene of a crime committed elsewhere in the system."

You, too, can save yourself costly guessing, discouraging delay, expensive time by becoming a registered Blue Streak dealer. You get the entire file of Secret Service Tips and continuing follow-ups. 40,000 Blue Streak mechanics use them to track down trouble fast.

Write **STANDARD MOTOR PRODUCTS, INC.**, 37-18 Northern Blvd., L.I.C. 1, N. Y.



Blue Streak

IGNITION PARTS

precision engineered for replacement.



Chilton's MOTOR AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

Reg. U. S. Pat. Off.

For THE AUTOMOTIVE SERVICE INDUSTRY

75, No. 2

January, 1956

Frank P. Tighe
Editor

J. K. Montgomery
Technical Editor

William H. Wolfe
Managing Editor

R. C. Rittenhouse
Associate Editor

Marcus Ainsworth
Statistical Editor

Howard Kohlbrenner
Art Director

Leonard Westrate
Detroit News Editor

Edward Janicki
Detroit Assoc. Editor

Joseph Geschelin
Engineering Editor

G. H. Baker
Washington Editor

R. M. Stroupe
Neil R. Regeimbal
Washington News Editors

R. Raymond Kay
Pacific Coast Editor

Paul Wooton
Washington Member of
the Editorial Board

Member



In This Issue...

Newscoop	33
Report to Our Readers	37
News scene	38
1956 Horsepower and Torque Ratings	40
Progress Report on IGO of America	42
Quick Service on the '56 Ford V-8	44
Studebaker's High-Flying Hawks	46
Chevrolet Corvette	48
Mr. Dealer—This One's For You	50
Successful Formula for One Stop Service	52
Two Toning Pleases Customers	54
New Products	56
New Car Registrations	63
1965 Expectations	64
Management Clinic	65
Readers' Clearing House	66
Body Shop Tips	68
Shop Kinks	70
Price, Weight and Body Table	74
Tune-Up Specifications	76
Calendar of Coming Events	136
Advertisers' Index	144
Last Laugh	146

Copyright 1956 by Chilton Company (Inc.)

RUSSELL W. CASE, JR., Publisher
CHARLES W. HEVNER, Asst. to Publisher
E. H. MILLER, Adv. Mgr. E. W. HEVNER, Cir. Mgr.
JOHN FLOOD, Research

REGIONAL MANAGERS

CURTIS F. MOSS, Chicago WILSON HOWE, New York
H. M. WERTZ, Chicago R. J. BIRCH, San Francisco
BEN E. BALL, Cleveland F. W. MCKENZIE, San Francisco
J. A. LAANBMA, Detroit L. H. JACKSON, Los Angeles
GORDON BRAUNINGER, Dallas

Offices: Philadelphia 39, Pa.—Chestnut & 56th Sts., Phone: SHerwood 8-2000.
New York 17, N. Y.—100 E. 42nd St., Phone OXford 7-3400. Chicago
1, Ill.—Room 916, London Guarantee & Accident Bldg., Phone Franklin
3-4245. Detroit 2, Mich.—1015 Stephenson Bldg., Phone Trinity 5-2000.
Cleveland 14, Ohio—790 National City Bank Bldg., Phone Cherry 1-4188.
Washington 4, D. C.—1093 National Press Bldg., Phone Executive 3-3474.
San Francisco 4, Cal.—300 Montgomery St., Phone DOuglass 3-4393.
Los Angeles 5, Cal.—3156 Wilshire Blvd., Phone DUNkirk 7-2119. Dallas 18,
Texas—8537 Eustis, Phone DAVIS 7-4176. Member of Audit Bureau of
Circulation.

MOTOR AGE. Published monthly by Chilton Co., Chestnut & 56th Sts., Phila. 39, Pa. Entered as Second Class Matter December 27, 1935, at the Post Office at Philadelphia, Pa.; Under the Act of Congress of March 3, 1879. Subscription price: United States, United States Possessions, \$4.00 for one year; \$7.00 for two years. Canadian, Foreign \$5.00 per year; single copies, 40 cents.

One of the Publications Owned by
① CHILTON COMPANY (INC.) ①

Executive Offices

Chestnut & 56th Streets, Philadelphia 39, Pa., U. S. A.

Officers and Directors

JOSEPH S. HILDRETH, Chairman of the Board
G. C. BUZBY, President

Vice-Presidents

F. M. FAHRENDORF HARRY V. DUFFY
WILLIAM H. VALLAR, Treasurer
JOHN BLAIR MOFFETT, Secretary
GEORGE T. HOOK ROBERT E. McKENNA
MAURICE E. COX IRVING E. HAND
FRANK P. TIGHE EVERIT B. TERHUNE, JR.
L. V. ROWLANDS RUSSELL W. CASE, JR.
JOHN C. HILDRETH, JR.

On

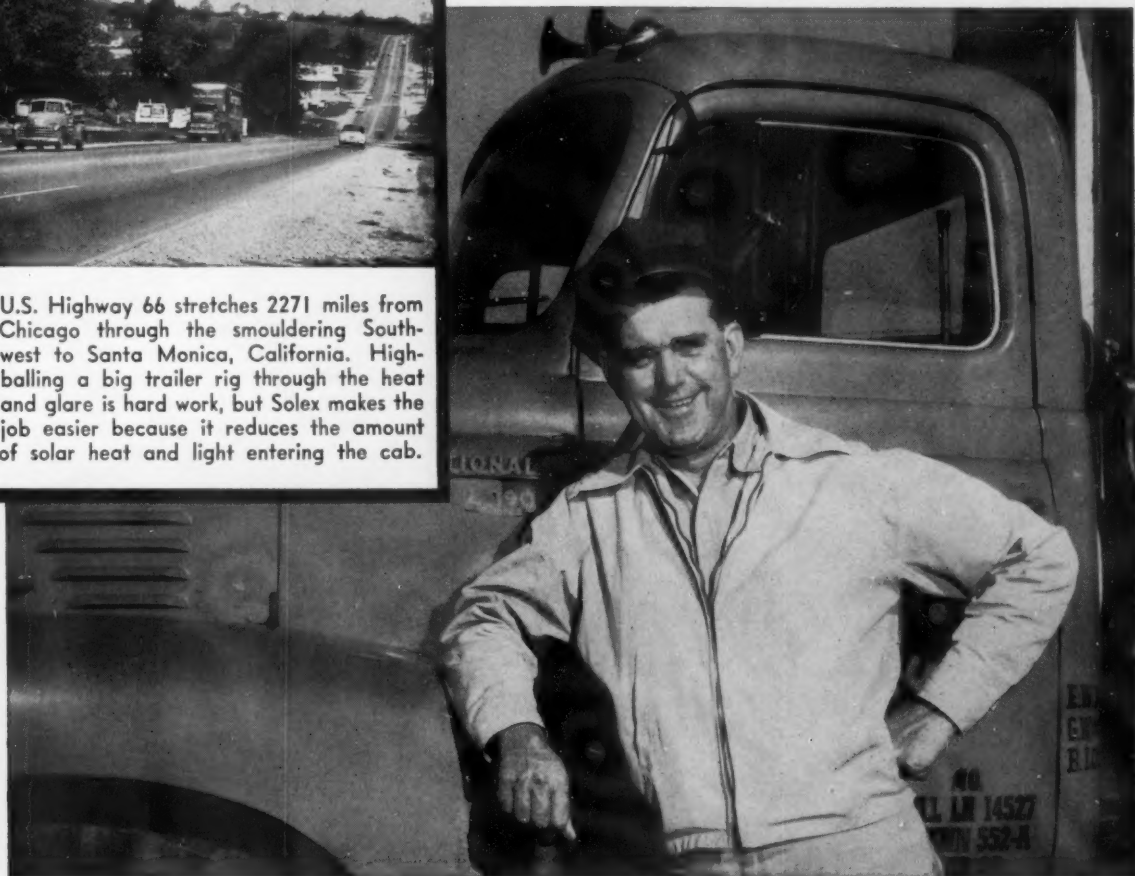
U.S.
ROUTE
66

"SOLEX keeps me fresh
after hours of driving"

says Chlorus Cooper, St. Louis, Missouri



U.S. Highway 66 stretches 2271 miles from Chicago through the smoldering Southwest to Santa Monica, California. High-balling a big trailer rig through the heat and glare is hard work, but Solex makes the job easier because it reduces the amount of solar heat and light entering the cab.



• We asked one of the hard-working truck drivers who haul on Route 66 how he liked the Solex® Safety Glass in his cab. His name is Chlorus Cooper, and he drives for Southern Plaza Express, Inc. out of St. Louis.

Mr. Cooper has driven thousands of miles in trucks equipped with both clear glass and green-tinted Solex Heat-Absorbing Safety Glass. He told us why he likes Solex, "Solex cuts down high-

way glare and makes my cab cooler and more comfortable. Actually driving's a breeze with Solex because time goes faster and I'm more relaxed."

These are good reasons for having Solex Safety Glass in all your new equipment, and replacing the glass in your present trucks with Solex. Your drivers will be more comfortable, less fatigued, and — as a result — safer drivers.

You can get Solex in all the well-known types of Pittsburgh Safety Glass —Duplate®, Duolite® and Herculite® —as well as in conventional plate glass. For more information write to the Pittsburgh Plate Glass Company, Room 6114, 632 Fort Duquesne Boulevard, Pittsburgh 22, Pa.



SOLEX "the best glass under the sun!"



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

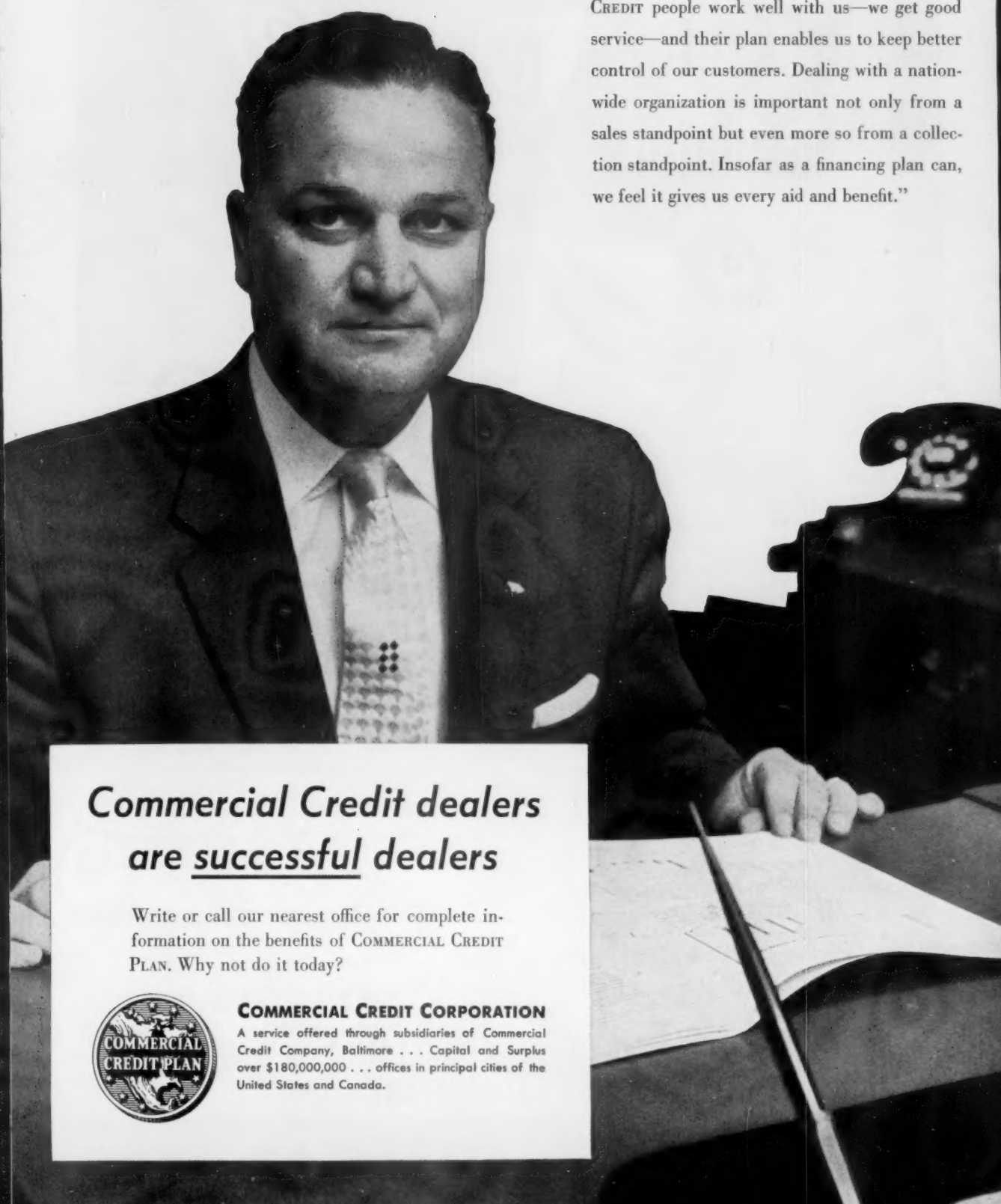
PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

"...gives us every aid and benefit..."

says Ford dealer **M. W. (BUD) ANDERSON**,
President, Berl Berry Motors, San Francisco, Calif.

"Frankly we use COMMERCIAL CREDIT PLAN because we like the way they do business. COMMERCIAL CREDIT people work well with us—we get good service—and their plan enables us to keep better control of our customers. Dealing with a nationwide organization is important not only from a sales standpoint but even more so from a collection standpoint. Insofar as a financing plan can, we feel it gives us every aid and benefit."



Commercial Credit dealers are successful dealers

Write or call our nearest office for complete information on the benefits of COMMERCIAL CREDIT PLAN. Why not do it today?



COMMERCIAL CREDIT CORPORATION

A service offered through subsidiaries of Commercial Credit Company, Baltimore . . . Capital and Surplus over \$180,000,000 . . . offices in principal cities of the United States and Canada.

insist on frenchtown insulators

... heart
of the
spark plug!



► Year after year, more than 12,000,000 spark plug insulators are shipped from the kilns at FRENCHTOWN to spark plug manufacturers all over the nation.

As the world's largest *independent* producer of spark plug porcelains since 1914, there are many reasons for the widespread acceptance of FRENCHTOWN products. Quality control is one.

For example, *every* FRENCHTOWN insulator is subjected to a rigid dielectric test (30,000 volts at 1.5 megacycles) . . . *every* insulator must pass an exacting surface inspection before and after glazing. These and other quality control measures which extend throughout all manufacturing processes help give FRENCHTOWN porcelain products the excellent dielectric and mechanical strength so essential in high voltage insulation.

Your best assurance of customer satisfaction is to be sure that the spark plugs you sell are made with FRENCHTOWN insulators. They are used by more spark plug manufacturers than those of any other independent maker of insulators.

frenchtown PORCELAIN COMPANY

80 MUIRHEAD AVENUE | TRENTON 9, NEW JERSEY

"See For Yourself How
LION
Nōkōrōde
UNDERCAR SEALER
AND SILENCER

- ✓ **Sprays on Quicker**
- ✓ **Saves Time, Trouble, Money!"**

50% More Undercoating Jobs from Every Drum

Check these facts, and you'll quickly see how Lion Nokorode Undercar Sealer and Silencer can build *extra* profits for you. Nokorode ...

- Is sprayed on thinner ($\frac{1}{16}$ ")
- Dries faster
- Lasts longer
- Goes farther
- Is concentrated
- Is preferred by spray men, because both application and clean-up are easier
- Is guaranteed by Lion Oil Company

Made under the process of U. S. Patent No. 2393774, and made from start to finish by Lion Oil Company. Send for complete details NOW!



LION OIL COMPANY
 A DIVISION OF MONSANTO CHEMICAL COMPANY
 EL DORADO, ARKANSAS



Lion Oil Company
 Dept. MA-8
 El Dorado, Arkansas

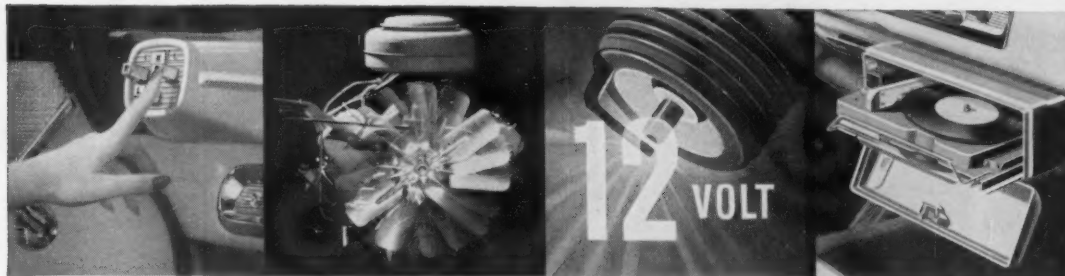
Please send me complete information about Lion Nokorode, and how it can increase underbody coating profits. No obligation, of course.

Name

Street

City State

Why the '56 DODGE enjoys a rapidly expanding market!

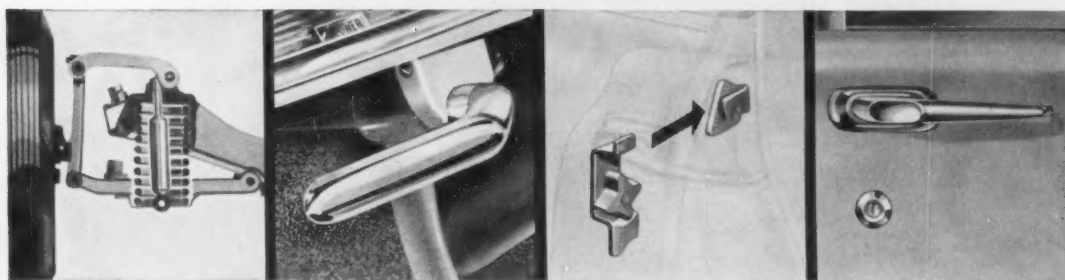


Push-Button Driving

New Break-Away Power

12-Volt Electrical System

Highway Hi-Fi Record Player



Oriflow Ride Control

Independent Parking Brake

Safety Latch-Lock Doors

Swing-Out Door Handles



**BORN OF SUCCESS
TO CHALLENGE THE FUTURE**

Surely you've read about the sensational endurance and speed tests given a regular stock closed car taken right off the Dodge production line. In a gruelling non-stop run for 14 solid days and nights on the famous Salt Flats at Bonneville, Utah, this Dodge covered 31,224 miles for an all-time record that averaged 92.86 mph! And the same rugged car also captured every standing-start and flying-start record for American closed stock cars!

Obviously, this performance indicates much more to a car-wise public than just running up a hill. Here was a clear-cut demonstration of matchless ruggedness and speed. Add to this the dramatic flair-fashioned styling, the comfort and advanced mechanical features which Dodge offers and you'll realize why eager buyers are flocking to their nearby dealers' showrooms to—

**SEE AND DRIVE THE
New '56 DODGE**

 **VALUE LEADER OF THE FORWARD LOOK**



**new
engine
performance**

at a price your customers will pay!

Now—with Pedrick Formflex Chrome Ring Sets—you can do "ring jobs" that will restore satisfactory engine performance, even in badly-worn engines, with a minimum of labor and parts.

The secret is the exclusive "Equalizer" that provides soft but positive and uniform pressure *all around the cylinder wall* for a positive seal. Pedrick Formflex Chrome Ring Sets deliver other extras—increased oil drainage . . . chrome plating on the oil-ring rails . . . chrome-plated top compression ring . . . easy, all-purpose installation. The result is the kind of a ring job you can guarantee to outperform and outlast in any engine.

So, ask your Pedrick jobber today about Pedrick's "Ring Job" program . . . how it can bring satisfactory engine performance to your customers *at a price they will pay* . . . how it can bring extra business and profits to you!



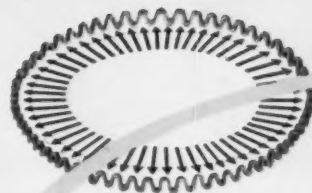
DEPEND ON

Pedrick

FOR THE RIGHT RING JOB
At A Price Your Customers Will Pay!

WILKENING MANUFACTURING CO., Philadelphia 42

IN CANADA: Wilkening Manufacturing Co. (Canada), Ltd., Toronto



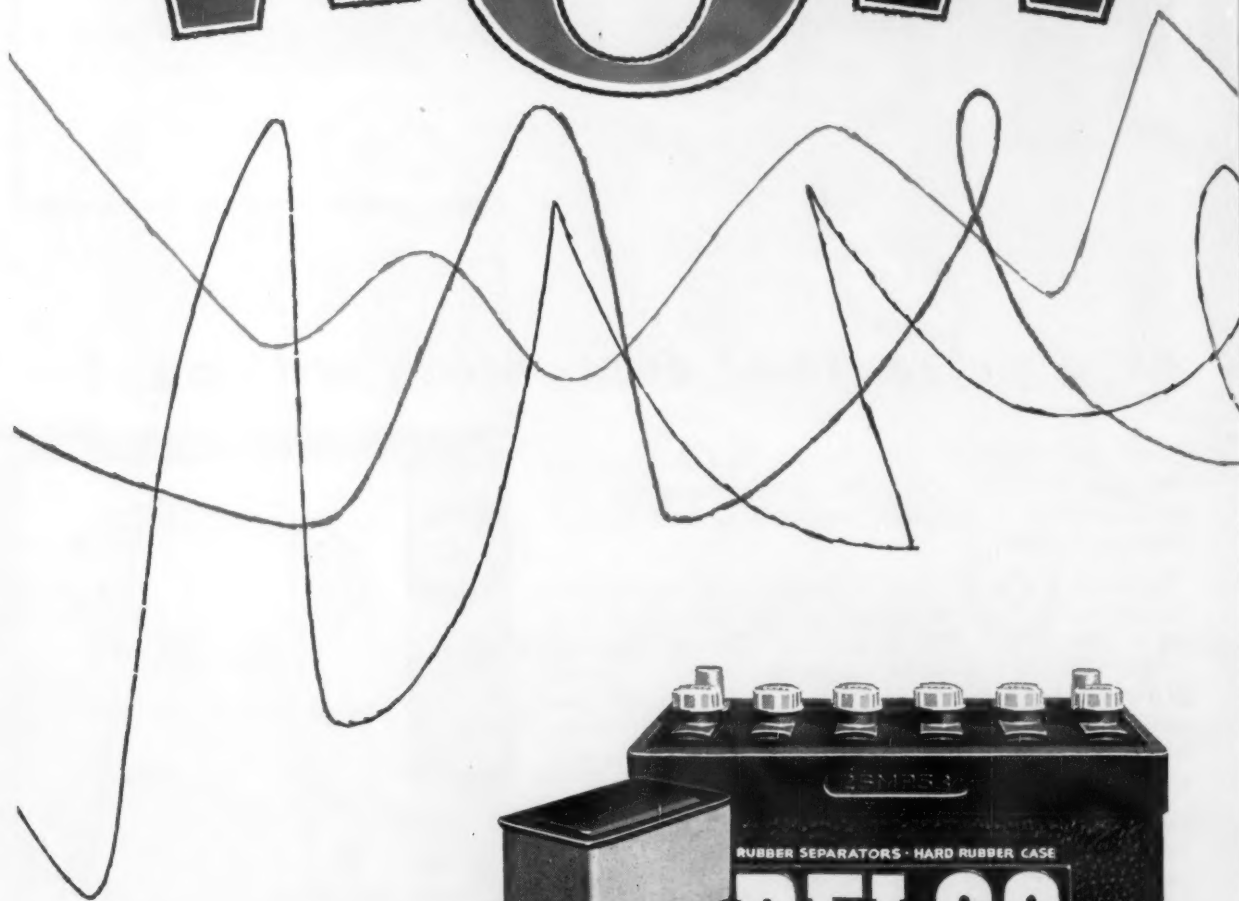
EQUAL PRESSURE EVERYWHERE



MEANS A PERFECT SEAL!

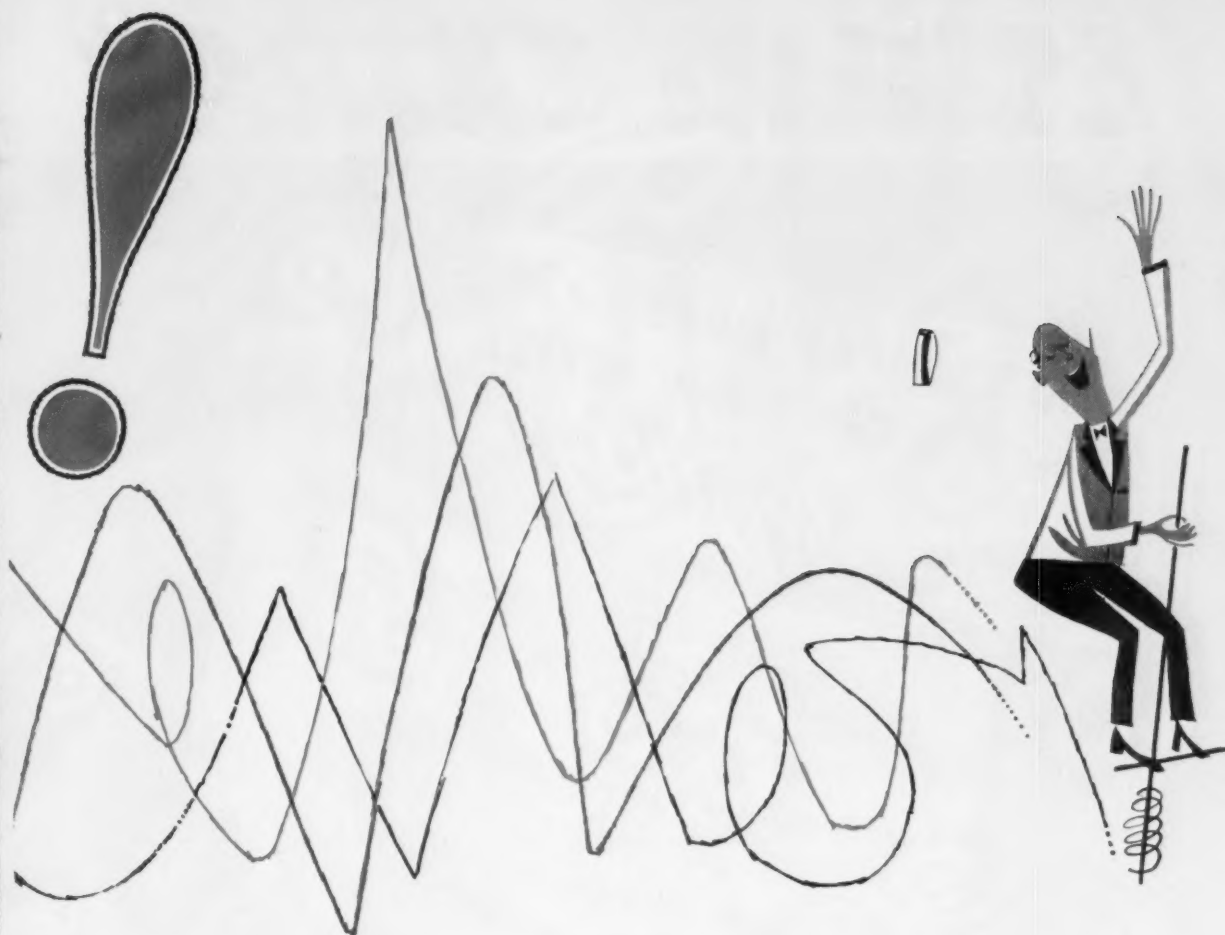


WOW



TUNE IN

ON TV.....Spectacular "Wide Wide World" on NBC Network.
ON RADIO...Lawell Thomas Newscast on CBS Network.
See local listings for time and station.



**DELCO DRY CHARGE BATTERIES PUT
NEW LIFE IN MY BATTERY BUSINESS!**

✱ They can't get old before they're sold
✱ and they're backed by long life guarantees

Now I can offer my customers the only original equipment battery with a three-year guarantee. And four years on the Delco Extra-Duty Line. It's great for business! The new guarantees are effective regardless of mileage in passenger car service. AND they are backed by General Motors.

That's not all. I can stock odd-size batteries as well as popular sizes, indefinitely—and they'll stay as fresh as the day they were made. It's Delco's all-new dry charge battery. All you do is add the electrolyte from Delco's new disposable container and the battery is ready to go any time—*without* an initial charge. They can't get old before they're sold.

With 6- and 12-volt types that fit every purse and purpose; with a longer guarantee; with the freshest power you can buy—I couldn't miss a battery sale if I wanted to. That's Delco for you!



PARTS SALES



**GENERAL MOTORS LEADS THE WAY—
STARTING WITH DELCO BATTERIES**

ECHLIN EXTRAS

YOU CAN PAY MORE . . .
but You CAN'T Buy BETTER

Ignition!

ECHLIN Contact Assemblies are available from your NAPA Jobber for most cars—1949 to date—and many previous models. In these Contact Assemblies famous ECHLIN EXTRAS include Heavy Duty Construction and Premium Quality at low cost. Pre-Set Spring Tension is featured where design permits Spring to be attached to Contact Bracket.

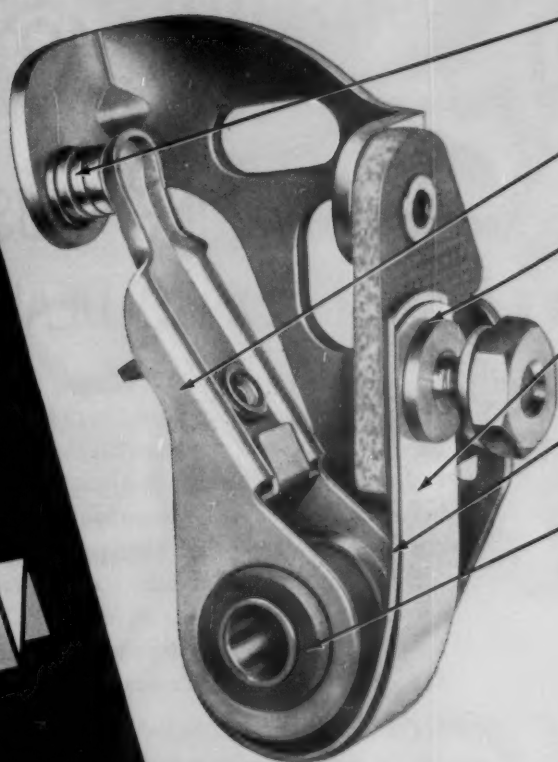
**ECHLIN Ignition Contacts are the
Most Satisfactory Ever Designed!**



ECHLIN IGNITION OF CANADA LTD. • 1866 AVENUE ROAD • TORONTO, ONT.

in CONTACT ASSEMBLIES

for all 3 Systems !



LARGE DIAMETER
MIRROR FINISH
TUNGSTEN

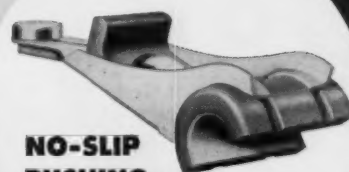
RUGGED, HEAVY DUTY
CONSTRUCTION

PRE-SET SPRING
TENSION

COPPER
CONDUCTOR STRIP

STAINLESS STEEL
SPRING

NO-SLIP,
HEAVY DUTY
BUSHING



**NO-SLIP
BUSHING**

METAL FRAME EMBEDDED
INTO RECESS...
CAN'T SLIP!

ECHLIN



Ignition

ECHLIN MANUFACTURING COMPANY • NEW HAVEN 5, CONN. • U.S.A.



THE METROPOLITAN OPERA IS "SWING" MUSIC FOR TEXACO DEALERS!

THE METROPOLITAN OPERA is swinging business to Texaco Dealers in all 48 states! Here's how: another season of opera radio broadcasts has begun, and the exclusive sponsor — for the 16th consecutive season — is Texaco. These famous Texaco broadcasts come direct from the stage of The Metropolitan Opera House in New York City every Saturday afternoon throughout the opera season. They go out on the ABC Radio Network — on more than 340 stations — to music lovers all over the U.S.A. and in Canada.

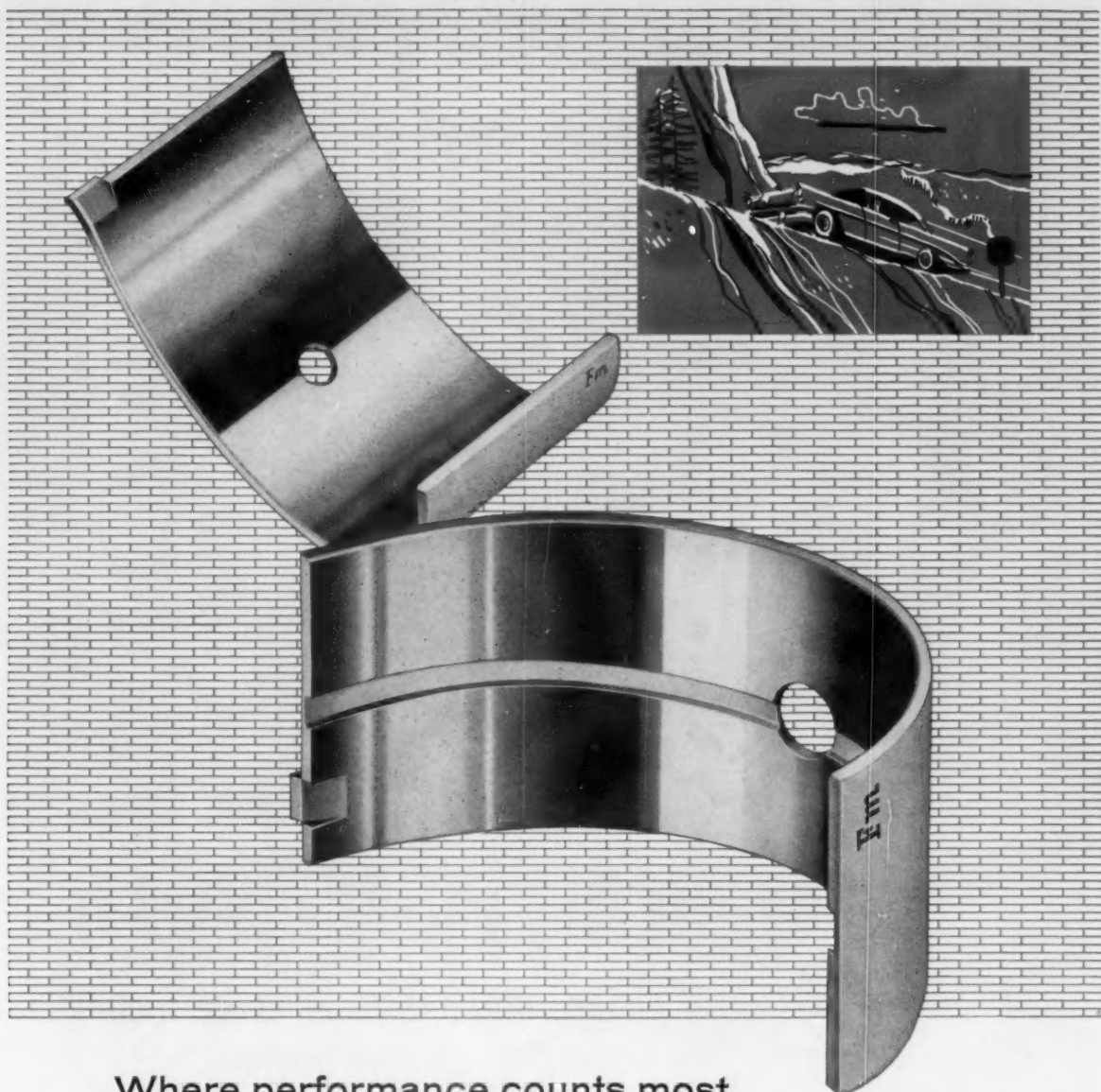
This is a big, automobile-owning audience. That's why the opera means more than just prestige for Texaco Dealers — it means good, solid *business*, too.

And, of course, this is just one part of the powerful advertising program continuing all year 'round. It is in addition to the TV-Texaco Star Theater, starring Jimmy Durante; magazines; newspapers; billboards; station display and many other sales-building promotions.

THE TEXAS COMPANY



No wonder TEXACO DEALERS are such busy dealers!



Where performance counts most

GIVE THEM Fm QUALITY!

Your customer—whether he drives a car, truck or tractor—considers his engine the most important in the world. When you rebuild that engine, he expects a pay-off in performance!

Federal-Mogul engine bearing quality pays off! Your customers *know* it—surveys prove it's the preferred replacement bearing line. For the performance pay-off . . . give them Fm quality!

FEDERAL-MOGUL SERVICE

Division of Federal-Mogul-Bower Bearings, Inc.



RESEARCH • DESIGN • METALLURGY • PRECISION MANUFACTURING • SERVICE

Car and truck manufacturers are building with chrome as original equipment...



...AMERICAN HAMMERED

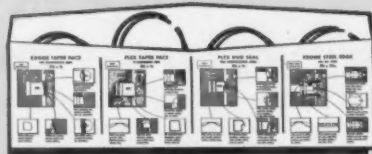
pre-seated Krome-Oil piston ring sets mean more money in your pocket in this expanding chrome market!

Yes, more and more of Detroit's cars are chrome equipped and will have chrome ring replacements. Latest survey figures indicate 57% of dealer installations were chrome.

Pre-seated Krome-Oil easier for you to sell, install! Here's why...

Pre-seating is a factory-applied lapping process equivalent to many hundreds of miles of actual engine operation—assures instant oil control, customer satisfaction. In addition, rugged dynamometer tests and strict manufacturing controls assure Krome-Oil's ability to hold oil on even the toughest jobs.

Be sure you're installing a full chrome ring set. Check for chrome on the top groove compression ring, on the rails of the oil ring. Install chrome confidently because Krome-Oil is pre-seated, seats instantly.



All-in-one ring envelope

All-in-one ring envelope contains all the rings for one piston. Packaged in order of installation. This prevents mix-ups, saves yours or mechanic's time.



Handle the tough jobs right the first time—
avoid costly comebacks

INSTALL KROME-OIL

American Hammered

AUTOMOTIVE REPLACEMENT DIVISION

2001 Sanford Street • Muskegon, Michigan

Manufacturers of American Hammered Automotive Replacement
Piston Rings. A Division of Sealed Power Corporation

Remember profit-packed American Hammered Power-Plus Service—
Koetherizing • GI-60 Groove Insert

Handle TODAY'S REPAIRS Right!

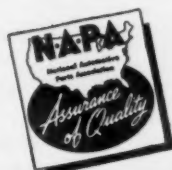
Choose
"Professional" Tools
by
New Britain



Greater strength, better fit, completeness of Line... New Britain Hand Tools offer you these BIG advantages. They handle today's repairs better, easier, and faster—add up to big savings in mechanics' time and trouble.

Whatever the job, there's a New Britain Tool designed to do it *right*—a complete Line of rugged Tools, designed by mechanics for mechanics, available individually or in sets to meet every shop requirement. All are carefully engineered, made from top quality materials, and fully guaranteed. You can count on New Britain Tools to give a lifetime of useful service.

See these great New Britain Tools today! Write for Catalog No. 58 and complete details.



New Britain

GREATER STRENGTH • BETTER FIT **HAND TOOLS**
THE NEW BRITAIN MACHINE CO. • NEW BRITAIN, CONN.

NEW!
TOOLS FOR
HYDRA-MATIC
TRANSMISSIONS



ACT-1
FRONT & REAR
CLUTCH TESTER



AGS-1
GOVERNOR SLEEVE
ALIGNING TOOL

PLUS... A Variety of Tools for Servicing Other Automatic Transmissions!

DYNAFLOW • POWERGLIDE
FORDOMATIC • MERCOMATIC
HYDRA-MATIC

Ask for Complete Information



See this illustration in full color in the Delco Super 11 advertisement which appears in the January 21 issue of The Saturday Evening Post.

New Delco Super 11 Brake Fluid improved with HTD is engineered for safer driving!

Developed by Moraine Products and General Motors Research to meet today's traffic requirements, Delco Super 11 improved with HTD provides an extra margin of safety under extreme driving conditions.

You can depend on this new hydraulic brake fluid to do a better, easier selling job for you, too. For one thing, it's the original equipment fluid in the brake systems of

General Motors cars and trucks. It is nationally advertised to presell your customers. And what's more...

**New Delco Super 11 improved with HTD
is 4 ways better!**

- Improved with HTD for effective operation at 50° higher temperature.
- It minimizes the chance of vapor lock.
- It reduces loss of fluid by evaporation.
- It has better lubrication qualities.

You'll find the new Delco Super 11 Brake Fluid readily available through United Motors distributors and General Motors car and truck dealers. Packaged in convenient quantities, from pint cans to 54-gallon drums.



A GENERAL MOTORS PRODUCT—A UNITED MOTORS LINE
DISTRIBUTED BY WHOLESALERS EVERYWHERE



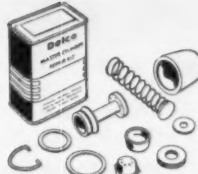
Another General Motors Value



DELCO LINED BRAKE SHOES are built to original equipment specifications. They're best for replacement.



WHEEL CYLINDER REPAIR KIT



MASTER CYLINDER REPAIR KIT

All the parts needed to put a wheel cylinder or master cylinder back in normal operating condition.



Moraine Products

Division of General Motors, Dayton, Ohio



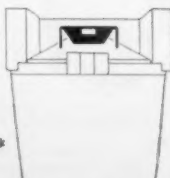
MORE
profit
opportunities!



WHEN YOU'RE THE MAN WHO STOCKS AND SELLS...

CARTER  **FUEL FILTERS**

Sell the world-famous fuel filter assortment featuring Carter's microscopic-pored ceramic filtering element (sizes to fit practically any make or model of car or truck.) Increase your profit with Carter's exclusive Magnatrap*



that fits inside any Carter fuel filter. The Magnatrap* is a powerful permanent magnet that traps and holds the smallest particles of iron oxide which no porous filter can catch.

For information, call your Carter supplier today.

*Trademark Registered



CARTER CARBURETOR CORPORATION

St. Louis 7, Missouri

Division of ACF INDUSTRIES, INCORPORATED

"MISTER, YOUR BRAKES DON'T WORK!"

Don't let this happen to one of your customers. Best way to make sure: *pull a wheel—look at the brake system—show the customer what's needed.* And when you reline, use Grey-Rock Balanced Braksets, the linings with the difference you can see, show and sell.



SEE the difference. Distinctive Grey-Rock brake linings look different—are different. You can see it in the many different types of linings Grey-Rock combines in sets engineered to give balanced brake action and longer lining life.



SHOW the difference... in distinctive Grey-Rock woven and molded combinations. Where used, they provide far better brake action than molded linings alone. In other Grey-Rock sets, all-molded types give the best results.



SELL the difference. When you can see and show the difference, you can sell the difference. Explain how different shoes, even in the same brake, do different work, and why different types of lining are necessary for balanced brake action and long wear.

ASK YOUR JOBBER FOR GREY-ROCK FACTORY-BONDED SHOE EXCHANGE FOR HIGHER RELINE QUALITY, LESS LABOR PER JOB, GREATER PROFITS

Only **Grey-Rock** makes

BALANCED BRAKSET LININGS

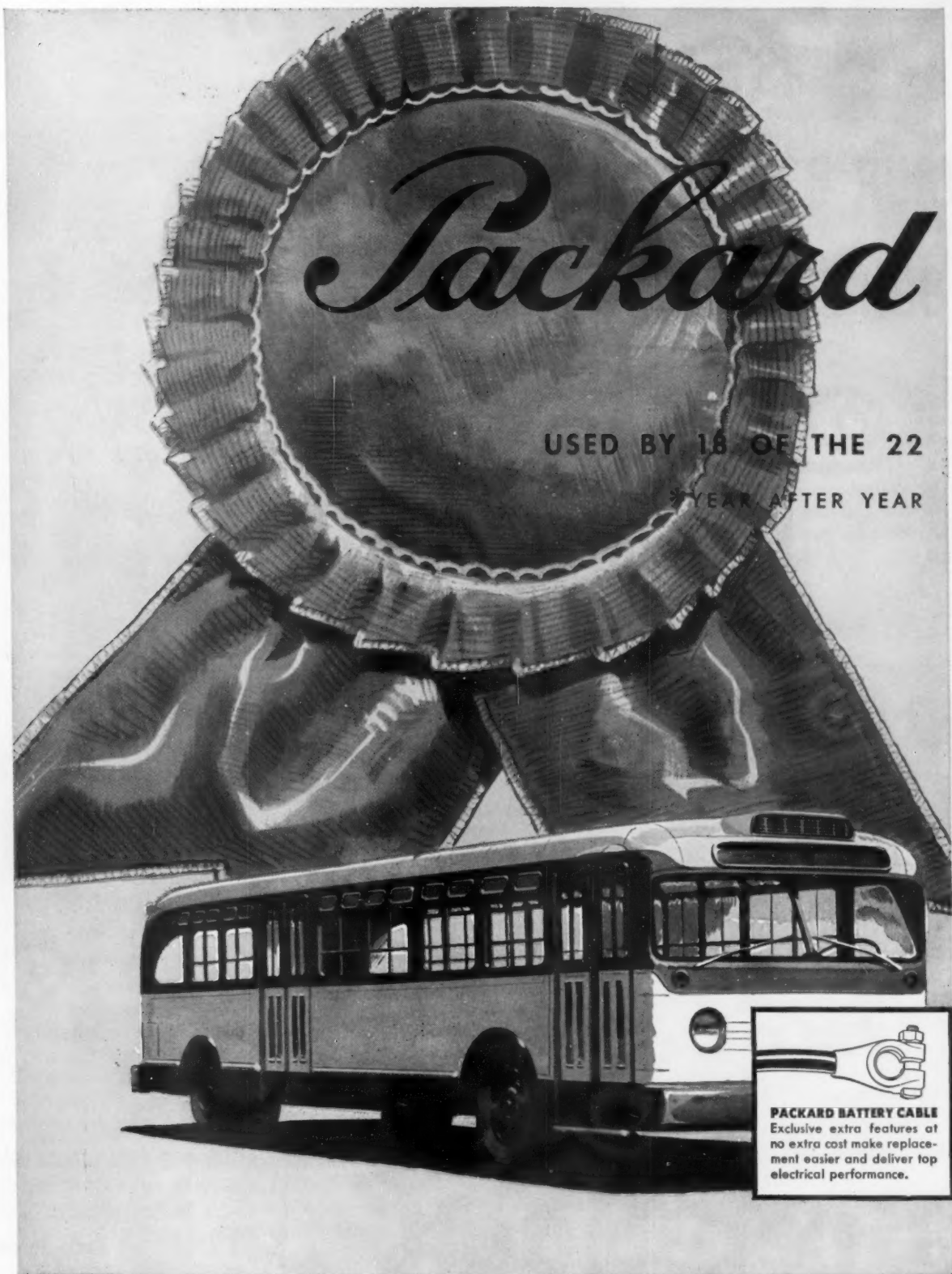
GREY-ROCK DIVISION of Raybestos-Manhattan, Inc., MANHEIM, PA.



RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Clutch Facings • Industrial Rubber, Engineered Plastic, and Sintered Metal Products • Rubber Covered Equipment • Asbestos Textiles • Laundry Pads and Covers • Packings • Abrasive and Diamond Wheels • Bowling Balls

Consistently advertised in the
POST and **Farm Journal**





Packard

USED BY 18 OF THE 22
*YEAR AFTER YEAR

PACKARD BATTERY CABLE
Exclusive extra features at
no extra cost make replace-
ment easier and deliver top
electrical performance.

FOREMOST BUILDER OF AUTOMOTIVE WIRING

Cable...

FIRST AGAIN



WINNERS OF "BUS TRANSPORTATION" AWARDS FOR 1955

MORE AWARD WINNERS USE PACKARD CABLE THAN ANY OTHER MAKE

Yes, again this year it's the same story . . . users of Packard Cable win most of the "Bus Transportation" awards. These operators have found, as you will, that Packard cable's exceptional resistance to heat, oil, chemicals, abrasion, weather and aging gives them more miles between cable replacements at lower cost per mile. To enjoy the same benefits, start today to re-equip all your vehicles with longer lasting Packard cable, the first choice of automotive engineers. See your Packard jobber.

- **PACKARD CABLE WILL GIVE YOU LOWER REPLACEMENT COSTS PER THOUSAND MILES OF OPERATION . . .**
Packard cable is built to resist all deteriorating conditions *longer!*
- **THE PACKARD CABLE LINE IS COMPLETE . . .**
Everything you need in cable from one source in a completely packaged line!
- **THE PACKARD CABLE LINE GIVES YOU EXTRA QUALITY YET COSTS YOU NO MORE . . .**
Because Packard leads the industry in engineering, in production!
- **PACKARD IS THE WORLD'S LARGEST MAKER OF ORIGINAL EQUIPMENT CABLE . . .**
Factory-installed on more cars, trucks and buses than all others combined.



PACKARD LOW-TENSION CABLE Stranded copper conductor covered with tough insulation of Packard "404" plastic. Compact, highly flexible and wear resistant.



PACKARD TELEVISION-RADIO SUPPRESSOR IGNITION CABLE This Packard exclusive suppresses radio and TV interference and is original equipment on millions of vehicles.



PACKARD ENGINE COMPARTMENT CABLE An exclusive Packard development made with special insulation to withstand heat, fuel oil vapors, steam and cleaning compounds.



PACKARD SUPER-DUTY CABLE Designed for extra rugged duty. Special Packard insulation is engineered to withstand the most severe road and weather conditions anywhere.



Packard

REG. U.S. PAT. OFF.
TRADE MARK



Packard Electric Division, General Motors, Warren, Ohio

A GENERAL MOTORS PRODUCT—A UNITED MOTORS LINE
DISTRIBUTED BY WHOLESALERS EVERYWHERE

Electronic Baked Cork

MEANS BETTER SEALING

WITH **Armstrong-Victor** GASKETS

It was bound to come with the electronic age—this exclusive Armstrong-Victor cork curing process. It's the biggest improvement in cork gaskets in half a century. Now A-V cork is cured thoroughly, evenly, in minutes instead of the hours it takes with steam—and with much lower heat. Now A-V's process stops loss of sealing efficiency by over-baking or under-baking—steam's greatest weakness in curing cork.

A-V Gaskets Have Uniform Density



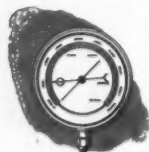
Electronic baking heats the cork composition from inside out. Each cork granule gets the same heat under equal compression. This produces a uniformity of density impossible with steam curing.

A-V Gaskets Have Greater Strength

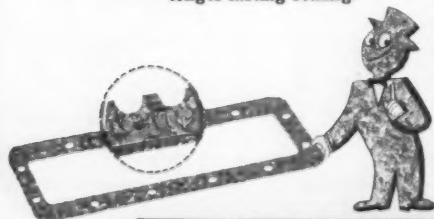


The uniformity of electronic baking . . . at lower heat under controlled time and temperature cycle . . . increases the tensile strength of cork composition. This means A-V gaskets can take shop handling easier with added safety against damage.

A-V Gaskets Have Livelier Sealing Power!

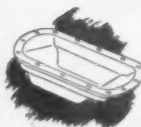


Lower temperature, uniform heat electronic curing precisely controlled, retains more natural liveliness of cork. This gives A-V gaskets a wider, more uniform compression and recovery range for longer lasting sealing.



Only genuine Armstrong-Victor Replacement Cork Gaskets have this trade-mark—the 2 notches.

A-V Gaskets Never Fail to Fit



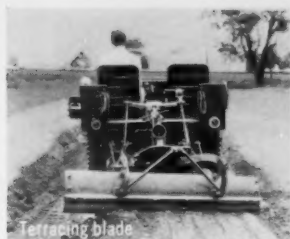
They're die-cut sharp and clean to exact dimension. All holes are round . . . sides straight . . . all openings accurately shaped. A-V methods and tools are the best in the business.

YOUR VICTOR WHOLESALE carries complete factory-fresh stocks—for every make and model—in this familiar package. Sold in sets or individual parts. Victor Mfg. & Gasket Co., P.O. Box 1333, Chicago 90, Ill.



Armstrong-Victor

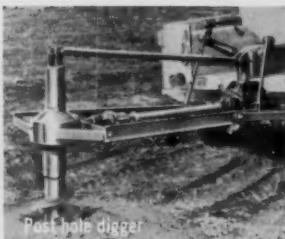
CORK COMPOSITION GASKETS • CORK SHEETS



Terracing blade



Air compressor



Post hole digger



Jeep A-Trench



Mobile drill

PLUS PROFITS*

from special equipment!

'Jeep' dealers can count on them. Can you?

When most dealers make a sale they remove the buyer from the market—at least for a considerable length of time. But with 'Jeep' dealers it's just the opposite.

For the man who buys a Universal 'Jeep' or other 'Jeep' vehicle becomes a better prospect than ever at the moment of sale—a prospect for more than 50 kinds of additional equipment that can go with the original sale.

And every time the owner has a new job to do, he becomes a prospect for a new piece of equipment. This means a potential for continued additional sales to owners and extra profits for dealers that no other line can offer.

What this can mean to you! Hundreds of dealers have signed up this year to sell the Universal 'Jeep' and other 4-wheel drive vehicles in the 'Jeep' family...after getting the facts. To see what these facts can mean to you, contact Dealer Development Department, Willys Motors, Inc., Toledo 1, Ohio.



Turbine sprayer-duster



Rotary cutter



Welder



Winch



Dump-O-Matic



Back hoe



Snow plow



Wrecker



**As a franchised dealer for the 'Jeep' family
you'd have these 6 roads to extra profits:**

- 1. Freedom from competition.** Only Willys dealers have the 'Jeep'...no worries about "wheeling and dealing" competition down the street. No loss of markets during the winter months...no lost dollars.
- 2. High resale value.** The average 2-year-old Universal 'Jeep' commands 90.4% of factory list price...your assurance of customer satisfaction and profitable deals when you wash out 'Jeeps' taken in trade.
- 3. High percentage of clean deals.** Nearly half the sales are made without trade-ins — full profit is attainable on each sale.
- 4. High service absorption.** Even with its famed ruggedness, the 'Jeep' family requires frequent service, because of its daily use in business...and most service jobs come back to the dealer instead of the independent garage.
- 5. Lowest-priced 4-wheel drive trucks.** As the lowest-priced 4-wheel drive truck in America, the 'Jeep' Truck has the inside track in the growing trend toward 4-wheel drive trucks in business, industry and agriculture.
- *6. Plus profits from special equipment.** (As explained above)

The **'Jeep'** family of 4-wheel drive vehicles

Plus these:

Hydraulic lift
 Selective drive hubs
 Steel cabs
 Dozer blade
 Hydraulic scoop
 Harrows
 Pumps
 Plows
 Row crop and field sprayer
 Hydraulic tailgate
 Rotary snow plow
 Trailers
 Tow hitch
 Lift booms
 Generator
 Body extension
 Cabinets
 Power take-offs
 Contour control wheel
 Service body
 Digging buckets
 Engine governors
 Bumper weight
 Wrecking boom
 Leveler blade
 Seat pads
 Canvas tops
 Pulley drive
 Push plate
 Disc harrow
 Pneumatic pruners
 Fire fighting equipment
 Wood saws

Build your business...

... tie into the

Wagner

FRANCHISED DEALER PROGRAM

You can be the top brake service expert in your community . . . Wagner will help you—if you'll just take the few easy steps to qualify for a franchise.

The Wagner Franchised Dealer Program is designed to (1) help you—and your mechanics—render better brake service, and (2) tell your customers that you are *the* top brake service expert in your community.

Wagner will supply you with all the information you need to quickly analyze and correct *any* brake problem and with the best brake parts, brake fluid and brake lining on the market today.

When you become a Wagner Franchised Dealer, you stock only a modest inventory of Wagner Lockheed Brake Products. Immediately you get brake charts, bulletins and service data prepared by expert Wagner brake engineers. You are supplied with plenty of identification—an official Wagner Franchised Dealer sign for your shop, stickers, plaques, seasonal displays, and uniform emblems. You also get free newspaper mats and post cards for your own advertising.

Here is an opportunity for you to boost your brake repair business and make an important contribution to traffic safety in your community because . . . **SAFE BRAKES SAVE LIVES.**

For further information, fill out the coupon and send it to us today.

**These sales boosters
help you!**



LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • NoRoL • CoMaX BRAKE LINING

boost your profits...



A56-13

TELL ME HOW TO UP PROFITS! ... by becoming a Wagner Franchised Dealer. I understand that there is no charge or obligation.

WAGNER ELECTRIC CORPORATION
6498 PLYMOUTH AVE., ST. LOUIS 14, MO., U. S. A.
(Branches in principal cities in U. S. and in Canada)

NAME _____
FIRM _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

AIR HORNS • AIR BRAKES • TACHOGRAPHS • ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES

HUDSON
DEALERS
HAVE IT!

HERE IT IS FROM AMERICAN MOTORS!

NASH
DEALERS
HAVE IT!

The All-New Car With the Volume Future



Featuring the Newest, Most-Wanted Body Styles—at Lowest Prices!

Yes, your eyes are right! That's a Rambler four-door hardtop—a *true* four-door hardtop with *no center posts*. The hottest-selling, fastest-growing new body style in many a year. Everybody wants it—and Nash and Hudson dealers have it in the lowest-price field—*priced for volume sales*.

And we'll be topping that with the first hardtop four-door station wagon the industry has ever seen!

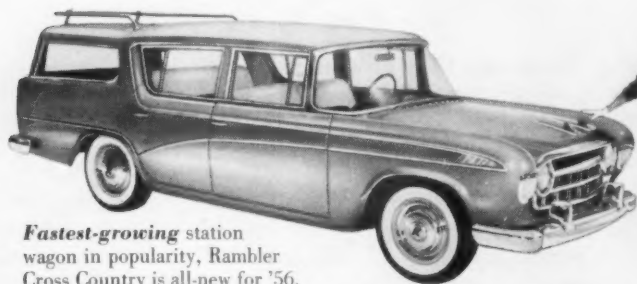
Every Rambler model is *styled* for volume sales—it's the low-priced car with the "Solid Gold Look".

It's *sized* for volume sales—king-size inside, Rambler-size outside . . . more headroom, shoulder room and entrance room—plus all the easier handling that has made Rambler the fastest-growing make.

It's *powered* for volume sales—33% more power—same famous economy.

It will be *advertised* for volume sales—in big 4-color spreads in the biggest magazines—in local newspapers—on radio, billboards—and on the top TV hit—DISNEYLAND!

And it's planned for *volume profits*. Every dealer can make extra bonus profits from the exclusive American Motors volume profit-sharing fund that is now paying dealers millions of dollars in cash on 1955 sales!



Fastest-growing station wagon in popularity, Rambler Cross Country is all-new for '56.

ALL-NEW, ALL-AMERICAN
1956

Rambler

MAKE THE SMART SWITCH
FOR '56—TO AN AMERICAN
MOTORS FRANCHISE!



AMERICAN MOTORS MEANS MORE FOR AMERICANS—MORE FOR DEALERS, TOO!

What makes customers come back for more?



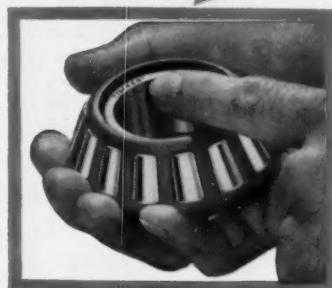
They'll all come back if you give 'em the best. When it's a bearing job... *just tell 'em it's TIMKEN!*

Having a daily beauty contest is probably a good way to attract customers, but what makes them really remember you when they need repairs is to give good service.

And one good way to do this is to show them that you use the highest quality replacement parts. When it comes to bearings, there'll be no doubt when you use Timken® tapered roller

bearings. That's the one bearing your customers recognize for quality. The Timken Roller Bearing Company, Canton 6, O. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

TIMKEN
TRADE-MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS



NOT JUST A BALL ○ NOT JUST A ROLLER □ THE TIMKEN TAPERED ROLLER □ BEARING TAKES RADIAL AND THRUST —○— LOADS OR ANY COMBINATION



*Here's a record
you can be mighty proud of...*

The same kind of Champions you sell sparked all the big NASCAR winners to victory in '55!

NASCAR track records fell like last autumn's leaves as Champion Spark Plugs sparked the winners to victory around the country during 1955. It was a great racing year for Champion, all around!

Tim Flock captured the National Association of Stock Car Auto Racing's prized 1955 title with his Champion-equipped Chrysler "300." And Frank Mundy won the AAA crown in another "300" Chrysler equipped with Champions.

As a matter of fact, Champion set a remarkable record at NASCAR's three outstanding race events because all 152 stock cars entered were equipped with Champion 5-rib Spark Plugs. The figures are: 69 cars out of 69 in the Darlington Southern "500"; 42 cars out of 42 in the Langhorne 250-

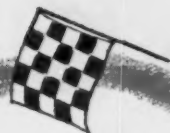
mler; and 41 cars out of 41 in the Memphis Grand National 300-mile race.

Free to choose any spark plug they wanted, every one of these champion stock car drivers insisted on the most dependable spark plug they could buy—Champion! It's added proof that men who know and drive all makes of stock cars—Chrysler, Chevrolet, Ford, Mercury, Pontiac, Oldsmobile, Buick, Cadillac, Plymouth, Dodge, Nash, Studebaker and Hudson—demand the high performance and full horsepower 5-rib Champions deliver!

It's been a great, successful year for Champion representatives, distributors, jobbers and dealers. And 1956 promises to be the biggest year ever, for all of us!

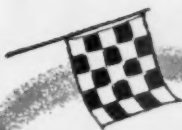
*Sincerely,
Jim L*

CHAMPION SPARK PLUG



THE LANGHORNE 250 MILER

Tim Flock, NASCAR's 1955 stock car racing title holder, tooled his Chrysler "300" out front to win the big Langhorne event early in 1955. Needless to say, Tim demands high-stepping performance in the car he drives. To help get it, he insists on full-firing, always dependable Champions. In fact, all 42 stock cars entered were equipped with Champions!



THE DARLINGTON "500"

One of the biggest events, and one of NASCAR's "big three" races for '55 was the Darlington "500." Herb Thomas took this one "hands down," winning a flashing victory in his 100% Champion-equipped Chevrolet. There were 69 entries, and all 69 stock cars were equipped with Champion Spark Plugs, by drivers' choice!



THE MEMPHIS GRAND NATIONAL

In this final one of NASCAR's "big three" racing events for '55, Speedy Thompson forged out front to take the checkered flag by driving a Champion-equipped 1956 Ford over the 300-mile course. Like all the other experts, Speedy selected the plugs that produce winning performance—Champions! And so did all the other 40 contestants in this important NASCAR race!



5-RIB

CHAMPION

SPARK PLUGS

SPARKING THE VICTORIES...

COMPANY, TOLEDO 1, OHIO

Blue Sunoco is all one grade **Premium Octane** **At Regular Gas Price**



**THAT'S WHY I SWITCHED
FROM A "TWO-GRADE"
SERVICE STATION
TO BLUE SUNOCO**

And thousands more are switching from premium-priced brands to Blue Sunoco for the same reason!



Interested in a Sunoco Dealership?

A Sunoco dealership may be available in your community. Call our local office or write us direct: Sun Oil Co., Philadelphia 3, Pa.

It is Sun Oil Company's single grade policy that enables it to produce a premium octane high-test gasoline at regular gas price.

And that's why Sunoco dealers, on the average, outpump competition by 2 to 1.

SUN OIL COMPANY • Philadelphia 3, Pa.

executive section Jobber

News NotesFrom the Editors

Parts Biz Boost Seen for '56

THE AUTOMOTIVE REPLACEMENT PARTS INDUSTRY is expected to show a 10 to 12 per cent increase in 1956, continuing the upward trend established last year, which is estimated to have been about 12 per cent above the previous year.

THIS ESTIMATE IS SOMEWHAT HIGHER than AMA's estimate for 1955 business which includes accessories as well as replacement parts and is based on manufacturers' excise tax figures.

IN GENERAL THE OUTLOOK is for a continued uptrend in replacement parts sales over the coming several years.

Pitch in and Help Northwest Flood Victims

AUTOMOTIVE WHOLESALERS in California, Idaho, Nevada and Oregon, who were hit by floods need help. The National Standard Parts Association asks all wholesalers in the Northwest area who were not hit, to pitch in and give assistance where they can.

NSPA ALSO HAS ASKED service industry manufacturers to give all possible help in the form of new packing materials, top priority shipments to the area and additional company men to assist with rehabilitation work in the stricken regions.

MEWA's Golden Gate to Profits

TWENTY PROMINENT SPEAKERS in the fields of sales, management, finance, legislation and labor have been invited by the Convention Committee of the Motor and Equipment Wholesalers Association to take part in its 1956 Convention, February 21-22, in San Francisco, California.

THE CONVENTION THEME will be the "Golden Gate to Profits." Convention headquarters will be at the Sheraton-Palace Hotel which is not far from the site of the Pacific Automotive Show being held February 23rd through 26th.

Rebuilders Convention Dates Set

AUTOMOTIVE PARTS REBUILDERS ASSOCIATION President, J. W. Harper has announced that the 1956 Convention and Trade Show will be held in Chicago. The rebuilders will convene at the Edgewater Beach Hotel on September 20, 21 and 22 for the annual meeting.

AT THE SEPTEMBER MEETING clinics will be held on the various automotive units to report on improvements and solutions for the problems that confront the rebuilding trade.

New Steering and Suspension Systems

MONROE AUTO EQUIPMENT COMPANY has under development a new type of power steering and suspension system for automobiles. No details of either unit are available at this time.

IT IS UNDERSTOOD, however, that the suspension system will incorporate a new method of springing. The suspension system is being tested at present by one of the automobile companies.

Expansion Rolls on Throughout Industry

A NEW 100,000 SQ. FT. PLANT will be constructed in Hartwell, Georgia by the Monroe Auto Equipment Company to serve original equipment and replacement parts customers in the South.

IT IS SCHEDULED TO GO INTO PRODUCTION in March. The plant is the fourth unit which Monroe has either acquired or built since 1945.

Another Expanding Company

ELECTRIC AUTOLITE COMPANY IS ERECTING a 140,000 sq. ft. plant addition at its Sharonville, Ohio bumper facility. Scheduled for completion in August, it will bring the plant area to more than 455,000 sq. ft. The reported cost will be \$4 million.

U. S. ECONOMYby Neil R. Regeimbal



IRS Will Eye Citizens' Tax Calculations

TAXPAYERS WILL HAVE TO FIGURE TAX DEDUCTION claims a little more carefully from now on. The Internal Revenue Service is ready to clamp down on citizens who make too many tax mistakes in their own favor.

NEW HIRINGS HAVE BROUGHT the IRS "police force" up to more than 12,000 persons. Agents are going after \$2 billion owed from previous years' taxes and will make close checks on this year's returns.

Credit Call by Customers to Continue

CUSTOMERS PROBABLY WILL BE AS READY to call for credit this year as they were in 1955. They'll have plenty of cash, too, because wages are to remain high, but most of them have the credit-buying habit.

THE URGE FOR BETTER LIVING will keep the sign-now, pay-later business thriving. The Federal Reserve Board says it doesn't intend to ask Congress for new controls to limit buying on credit.

OPERATION

JOBBER

Good Time for Upping Ad Programs

A RECENT survey of some sixty leading manufacturers of parts, tools, equipment, accessories, paints, chemicals and supplies indicates greater advertising and promotional efforts and a high level of business in the automotive service business in 1956. On questions concerning expected sales volume in this new year, the picture appears to be exceedingly bright for manufacturers, jobbers and their customers.

Time Is Ripe

With manufacturer suppliers making plans for greater sales and increased advertising next year, the time is ripe for automotive jobbers to step up their promotional efforts to get a bigger share of the increasing amount of business available.

Most jobbers understand advertising and sales promotion and use them consistently as a successful selling tool. But in this dynamic field of advertising and sales promotion there is always room for review of objectives and goals.

What can we expect of advertising programs solidly and skillfully executed?

Backing Up Salesmen's Efforts—Advertising pre-sells your customers on you, your lines and your services. Your salesmen can get to the moment-of-sale faster, make

more calls and do a better job on each call.

Better Customers Out of "Part-Timers"—Constant advertising of your name, services, and the like builds buying habits that favor you. Advertising makes more contacts with "fringe" customers. Some of your accounts do not have enough potential volume to justify regular calls. Others are located in out-of-the-way places. Advertising helps keep such accounts alive so that occasional calls can be more productive.

Strengthens Your Position in Your Area—Your territory is constantly studied by outside chain stores and other distributors to determine whether your trading area will support another outlet. If advertising has helped build up your name, competitors will hesitate to start in competition with you.

Seasonal Items

Seasonal Line Turn-Over — Occasionally you will want to conduct a campaign on seasonal items. Advertising can blanket your territory ahead of salesmen's calls; can frequently pull telephone and mail orders.

Acceptance of New Lines and New Products — All major lines and new products are advertised by their manufacturers. But your advertising of them is a special



endorsement and speeds up acceptance among *your* customers.

Market Strength

Active advertising of your important lines permits you to capitalize individually on manufacturers' trade and consumer advertising. It identifies you as the source of supply for your important lines. It cements the line to you and you to the line, building mutual market strength.

Advertising and sales promotion when properly planned and directed is a sharp selling tool for the automotive jobber. It is especially productive in a rising market when the opportunities for extra and larger sales are multiplied many times!

signs of the times

YEC Group Has Role In NSPA Convention

Members of the Young Executives Club of NSPA—an active group of over 350 wholesaler and manufacturer junior executives from member-firms of National Standard Parts Association—will take an important part in the NSPA 4-GP/56 "New Formula" Convention on February 21-22 at the Hotel Mark Hopkins, San Francisco, according to Howard A. McMurchie, secretary of the group.

Featured speakers will be Robert E. McNally, president, Battle Creek Motor Parts, Inc., Battle Creek, Michigan; and Edmond T. Duffy, Automotive Distributor Sales Manager, Fort Wayne Division, The Weatherhead Company, Fort Wayne, Indiana.

AC Distributor's Council Members

Representatives for 1956 to the AC Automotive Parts Distributor's Council were announced recently by GM's AC Spark Plug Division. Object of the Council is to effect closer relationship between distributors and AC.

Distributor representatives named to the 1956 Council are W. T. Barron, Jr. (Barron Motor Supply, Iowa), H. B. Braden (American Gear & Parts, Texas), E. J. Brickhouse (Chesapeake Auto Supply, Va.), K. V. Browne (Crow-Burlingame Co., Ark.), Lawson Driver (York Supply, Ohio), Wally E. Glycer (Lamus-Lundlee Co., Calif.), Andrew N. Johnson (Automotive Electric Service, N. Y.), F. G. McKenzie (Automotive



IN COOPERATION with the nation-wide traffic safety program conducted in connection with S-D Day (Safe-Driving Day, Dec. 1, 1955), Walker Manufacturing Company donated before S-D Day a handsome trophy to be awarded to the Wisconsin city of 50,000 to 100,000 population that achieved the best accident-free record during the 21-day campaign period. When the trophy was donated a ceremony was held at Racine, Wisconsin. Left to right: H. N. Anderson, Racine S-D Day chairman; John Secanky, Racine police inspector; T. Faxon Hall, Walker vice president; Jack H. Humble, Mayor of Racine; and Peter Mogensen, Jr., president of Racine County Safety Council.

Supply Company, West Virginia).

Kermit Moore (H. D. Taylor Co., N. Y.), William D. Myers (Myers Motor Supply, Mo.), Herbert E. Nimmer (Monark Supply, Wis.), Stanley Stover (Stover Company, Mich.), Lucius Tarbell (Tarbell-Watters, Mass.), H. D. Taylor (Taylor Parts & Supply, Ala.), Edward Voorhees (United Service, Tenn.), and Howard Weaver (Featherstone's, Calif.).

Ammco Tools Expand

For the second time within the last 12 months, Ammco Tools, Inc., of North Chicago, Ill., has found it necessary to enlarge their manufacturing facilities. Another new building is being erected to house their Research and Experimental departments.

Federal-Mogul Holds Detroit Conference

Sales opportunities for jobbers and bearing specialists in the expanding bearing service market was a major topic at a conference of Federal-Mogul Service sales personnel in Detroit the first week in January.

All salesmen and managers of the company's 18 service districts as well as central office personnel participated in the eight-day conference. The program included tours of the company's Bower Roller Bearing Division plant in Detroit, its Bearings Company of America ball bearing plant in Lancaster, Pa., and Federal-Mogul sleeve bearing plants in Greenville and St. Johns, Michigan.



APPOINTED RECENTLY to the board of directors of the Automobile Timing Association of America, Inc., was J. H. Perry. Perry is midwest regional sales manager for Proto Tools, one of ATAA's sponsors. ATAA is a national non-profit organization of hot rodders.

N. C. Wholesalers Hold Cruise Parley

The success of the North Carolina Automotive Wholesalers Association Fall Convention—cruise to Bermuda, November 17-23, was far greater than expected reports the Association's officers and directors.

Over 130 persons, including jobbers and factory men from North Carolina and five other states were aboard the M. S. STOCKHOLM when it sailed from Wilmington, N. C. State Port on November 17.

Governor and Mrs. Luther H. Hodges of North Carolina went along as guests of the N. C. Automotive Assn. Governor Hodges delivered the principal address at one of the association's business sessions.

Recreation activities aboard the cruise ship consisted of a trap shooting contest off the fantail, a masquerade party, bridge tournaments, canasta tournaments, Gin rummy tournaments, concerts, horse races, shuffleboard, and other deck sports and contests.

Spencer W. Potter Retires from AEA

Spencer W. Potter, Executive Secretary of the Automotive Electric Association, retired for reasons of health on January 1, 1956.

During the recent AEA Annual meeting in Chicago, G. Z. Spencer, the president of the Association, presented to "Spence," as he is familiarly known in the industry, a certificate of appreciation together with a gold wrist watch, in recognition of his long and valuable services.

Mr. Potter served in the capacity of executive secretary for the Automotive Electric Association from 1938 to the time of his retirement.

Judges Are Chosen

The Motor and Equipment Wholesalers Association's Young Executives Group has selected its annual Essay Contest judges from among member wholesalers. The 1955 essays on "The Jobber Fights Back" will be judged by: John A. Blessing, Harrisburg Autoparts Co., Harrisburg, Pa.; Warren T. Ruddell, Central Rubber & Supply Co., Inc., Indianapolis, Ind.; and Charles A. Nudelman, Motor Car Supply Co., Seattle, Wash.



DECKED OUT in "Doctor of Motors" outfits, Janet Wise and Elizabeth Callans hold Perfect Circle piston ring merchandise. Girls were posed, reports J. W. Lester—manager of Springfield (Ill.) Auto Supply Co.—to "glamorize our shop just a bit."

DeVilbiss Begins Sales Conferences

Henry M. Kidd, DeVilbiss Company vice president in charge of spray painting equipment sales, recently announced inauguration of a series of week-long sales conferences for DeVilbiss sales representatives to keep them abreast of the latest developments in the rapidly expanding spray equipment field.



VIEW OF HEAD TABLE at one of the Philadelphia Automotive Service Association's recent monthly meetings. Featured guest speakers were MOTOR AGE's Detroit News Editor Len Westrate and Washington News Editor George Baker who were introduced by ASA president Frank Gible. Other guests included racing notables Len Duncan, Bill Smythe, Ed "Dutch" Schaeffer, and National Speed Sport News editor Chris Economaki—who introduced the race drivers.



COMPLETE DIVISIONALIZATION of the Black & Decker Mfg. Company sales force in the United States has been announced by John F. Spaulding, vice president-general sales manager. Announcement was made at sales meeting held recently in Hershey, Pa. Identification of front row above, left to right: Regional Sales Managers A. L. Proctor, Southeast; G. H. Treslar, Northeast; J. P. Spain, Pacific Coast. A. L. Fehsenfeld, Sales Manager, Hardware Division; J. F. Spaulding; Alonzo G. Decker, President and Chairman of the Board; R. G. Horner, Vice-President—Sales Planning; A. L. Boehm, Sales Manager Industrial-Automotive Division. Regional Sales Managers F. S. Romero, Latin America, D. S. McKeracher, Canada, and E. J. Bernau, Central U. S.

Automotive Wholesalers' Sales and Inventories

Bureau of the Census, Department of Commerce

Per Cent Change

Region	Sales			Inventories	
	Oct. 1955 from Oct. 1954	Oct. 1955 from Sept. 1955	10 Mos. 1955 from 10 Mos. 1954	Oct. 1955 from Oct. 1954	Oct. 1955 from Sept. 1955
New England.....	.....	.....	.....	.....	.....
Middle Atlantic.....	+ 9	+ 4	+10	+33	+3
East North Central.....	+17	+12	+17	+16	+1
West North Central.....	+10	+ 1	+ 9	0	-1
South Atlantic.....	+18	+ 6	+18	+ 5	-7
East South Central.....	+20	+20	+15	+13	0
West South Central.....	+27	+ 6	+ 6	+13	0
Mountain.....	+ 9	- 8	+16	.....	.....
Pacific.....	+10	-10	+16	+ 5	-7
Entire United States.....	+14	+ 5	+13	+10	-2

Indicators of Business Activity

These figures are based on latest thirty-day reports

	Latest Data	Month Before	Year Ago	Percentage Change from—	
				Month Ago	Year Ago
PRODUCTION					
Motor Vehicles (Units).....	841,000	601,256	587,785	+39.9	+43.1
Industrial—F. R. B. 1947-'49=100 (Adj.).....	142	142	126	None	+12.7
SALES					
New Cars.....	506,000	576,045	381,081	-12.2	+32.8
Replacement Tires (Units).....	4,460,162	5,170,464	4,248,470	-13.7	+ 5.0
Manufactures (\$ Millions)					
Durable Goods.....	\$13,276	\$13,692	\$10,295	- 3.0	+28.9
Non-durable Goods.....	\$13,364	\$13,532	\$12,194	- 1.3	+ 9.6
Department Stores, 1947-'49=100.....	123	122	113	+ 0.8	+ 8.8
GENERAL					
Consumers' Price Index, 1947-'49=100.....	114.9	114.9	114.5	None	+ 0.3
Civilian Employment.....	64,807,000	65,161,000	61,732,000	- 0.6	+ 5.0
Unemployment.....	2,398,000	2,131,000	2,893,000	+12.5	-17.1

Industry Meetings

- Feb. 6-9, 1956—Automotive Accessories Manufacturers of America Exposition, Navy Pier, Chicago, Ill.
 Feb. 21-22—Motor and Equipment Wholesalers national membership convention, San Francisco, Calif.
 Feb. 21-22—National Standard Parts Association convention, Mark Hopkins Hotel, San Francisco, Calif.
 Feb. 22 — Automotive Booster Club banquet, Palace Hotel, San Francisco, Calif.
 Feb. 23-26—Pacific Automotive Show, Civic Auditorium, San Francisco, Calif.
 Apr. 11-14—Middle Atlantic Regional Automotive Show, Commercial Museum, Philadelphia, Pa.
 May 10-13 — Southwest Automotive Show, Houston Coliseum, Houston, Tex.
 May 25-26 — Southeast Automotive Show trade conference, Asheville, N. C.
 June 3-6—Automotive Engine Rebuilders Association, 34th annual convention, Sherman Hotel, Chicago, Ill.
 June 7-10 — Upper Midwest Automotive Trade Show, Minneapolis Auditorium, Minneapolis, Minn.

MEWA Appointment

James W. Cassidy, Washington, D. C., attorney, has been appointed General Counsel for the Motor and Equipment Wholesalers Association. Prior to his moving to Washington, D. C., Cassidy engaged in general practice of law in Mississippi.



LONDON MOTOR SHOW in Earl's Court was officially opened by one of Britain's great naval figures, Admiral of the Fleet Viscount Mountbatten. As he later toured the exhibits, H. G. Starley, right, deputy managing director of Champion Sparking Plug Company, Ltd., took the occasion to present him a souvenir key ring.

Texas Firm Marking Golden Anniversary

Corpus Christi Hardware Company to celebrate 50 years in business serving Corpus Christi and all of South Texas, Victoria to the coast and West, has invited all its customers to attend their celebration which will be held at a new Exposition Hall in Corpus Christi on February 16, 17, 18 and 19.

More than 100 booths, manned by factory representatives, will feature all the different products and lines that they sell, and the new products that will be introduced for 1956, including Hardware, Sporting Goods, Housewares, Lawn and Garden Supplies, Heating Supplies, Plumbing, Electrical Supplies and Automotive Equipment.

Fla. Wholesalers

At the first annual convention of the Florida Automotive Wholesalers Association, officers elected for 1956 were Edgar H. Rogers, Jr., president; W. C. Stephens, vice pres.; Clarence Babbitt, secretary; and A. B. Estridge, treasurer.

Delco-Remy Offers 3-Tone Auto Horn

A new and distinctive three-tone auto horn, developed by the Delco-Remy Div. of General Motors Corp. is being made available as optional equipment on 1956 cars.

The new signal adds a third horn to the conventional two-tone signals in use on passenger cars for many years. J. H. Bolles, Director of Sales and Engineering for Delco-Remy, points out that a melodious horn signal is obtained with the grouping of three horns.

Advisory Committee

A. P. Walter, president of the Automotive Warehouse Distributors Association, has announced formation of a standing committee to be known as the Manufacturers' Advisory Council of AWDA.

Present members of the council are Ralph Doherty, sales manager of the Wilkening Mfg. Co., who will serve as council chairman; L. W. Klein, vice pres., The Gabriel Company, and G. P. Robers, general sales manager of the Distributor Division, the Weatherhead Co.



POSTMASTER General Arthur Summerfield was recently presented with a set of gold-plated automobile license frames in behalf of the President's Committee for Traffic Safety. The frames bear the slogan "Drive Safely." Above the Postmaster General is shown trying out the frames.

Membership Roster Revised by A.E.R.A.

According to Association Headquarters in Indianapolis, all members have recently been supplied with an up-to-date listing of the membership by state and city. Each member is listed with a code number which will be used in connection with the Automotive Engine Rebuilders Assn. used equipment exchange bulletin.



BRAKE CLINIC: Anthony "Tony" D'Andrea (standing), chief service instructor for the Raybestos Division of Raybestos-Manhattan, Inc., discusses

a Cadillac brake shoe with some of the 175 mechanics and dealers who attended his demonstrated lecture at Pulaski Hall in Philadelphia recently.

Motor Age's Who's Who

R. R. Malik (Photo) has been elected president of Sun Electric Corporation. **J. F. Schwartz** has become vice president and controller and **A. E. Loomis** is now general production manager. **H. M. Coffman** has assumed the post



of executive vice president, **L. G. Langpop** is promoted to secretary treasurer, **J. M. Hill** is now assistant secretary treasurer, and **Frank E. Draper**, has been appointed vice president in charge of the national sales division of Sun.

Charles E. Lambert has been appointed sales manager of the Grant Storage Battery Company. **J. J. Kennedy** has been appointed operations and advertising manager, and **L. J. Hauskey** has been appointed assistant sales manager and Minneapolis branch manager for the same company.



Edmund T. Duffy has been appointed automotive distribution sales manager for the Weatherhead Company. He will be responsible for the sales and merchandising of all Weatherhead automotive products.

George W. Keown (left) has been elected vice president and



takes charge of sales for Tung-Sol Electric Inc. **John D. Van der Veer** (right) has been appointed general sales manager, succeeding Mr. Keown in that position.

Dudley A. Bragdon has been elected vice president in charge of aftermarket sales and service for the Carter Carburetor Corporation. **Lee B. Read** has been elected vice president in charge of engineering for the company.

M. H. Smith (Photo) has been advanced to general sales manager in charge of sales personnel



of the Electric Auto-Lite Company. **T. M. Birmingham** has become sales administration manager, **L. B. O'Loughlin** is now spark plug merchandising manager, **F. S. Stead** has become service manager and **K. J. Casper** moves up to manager of the company's combined sales offices.

R. K. Thompson has been appointed assistant manager, Manufacturing Service division of Holley Carburetor Company. **Carroll R. McBeth** has become assistant to the executive vice president of the same company.

E. N. Robinson (photo) manager of distribution of the Alemite and Instruments division of Stewart-Warner Corp., has been elected president of the Automotive Electric Association. **C. W. Apley**,



Ballantine Auto Parts & Service, Chicago, **William E. Blank**, Electric Auto-Lite Co. and **J. L. Finn**, Gardner, Inc., Cincinnati, were named vice presidents. **Richard Durham** was named secretary-treasurer of the association.

Reginald Whitson has been named west coast regional manager for Warner Electric Brake and Clutch Company. **Wesley E. Timmcke** is now the southern regional manager for the same company.

Henry R.

Trees has been appointed assistant to the general manager of the automotive division of The Electric Storage Battery Company. The new official previously served as vice president and director of Carling Brewing Company.





R. C. COLYEAR



W. J. LOONEY



R. L. STACEY

NAPA Elects Officers and Directors

R. C. COLYEAR was elected President of the National Automotive Parts Association at the 31st Annual Meeting of the organization in December at the Drake Hotel in Chicago. Wilton J. Looney was elected Vice Pres.

Other officers were re-elected as follows: Henry Lansdale, Chairman of the Board; R. L. Stacey, Vice President and General Manager; Myron L. Buck, Secretary.

Mr. Colyear is President of Colyear Motor Sales Company which owns and operates the NAPA Warehouses which cover the Pacific Coast. Mr. Looney is President of Genuine Parts Company, operating NAPA Warehouses in the Southeast, New York, New England and Nebraska.

Confidence Theme

The meeting, built around the central theme of "Confidence," marked the close of the biggest year in NAPA history.

During the year sales of NAPA Warehouses and Jobbers reached an all-time high; new warehouse distributing centers were established in Hawaii, Charlotte, N. C., High Point, N. C., and Charleston, W. Va. The organization looks forward in 1956 to further expansion of NAPA distribution, as well as further broadening and improvement of service to NAPA Jobbers.

In addition to the officers, directors elected to the NAPA Board are as follows: A. F. Baxter, NAPA Buffalo Warehouse; L. C. Benson, NAPA Jacksonville Warehouse; L. A. Boswell, NAPA Salt Lake City Warehouse; H. A. Bradley, Jr., NAPA Philadelphia Warehouse; J. M. Heffelfinger, Boozer-Test Management Service; F. E. Nolen, Colyear Motor Sales Company; C. T. Reinberger, Automotive Parts Company; F. F. Rohrer, NAPA Pittsburgh Warehouse; D. N. Test, Jr., Boozer-Test Manage-

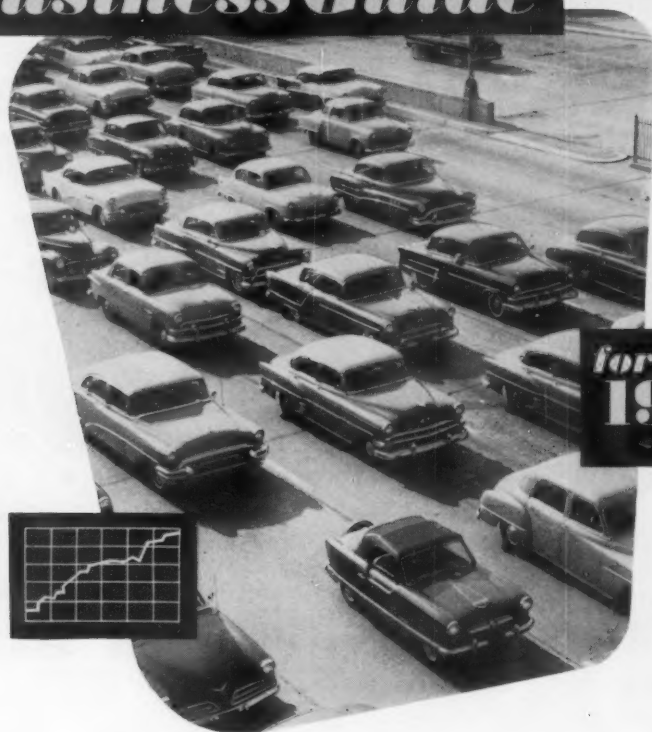
ment Service; and R. L. Turner, Genuine Parts Company.

The NAPA Manufacturers' Council re-elected all officers. H. W. Clough, Belden Manufacturing Company was elected Chairman; M. B. Terry, American Brakeblok Division, American Brake Shoe Company, Vice Chairman; and G. M. Salzman, Clevite Service Inc., Secretary-Treasurer.

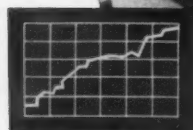
Council Directors

The following directors were elected by the Manufacturers' Council: O. W. Brown, Wisconsin Machinery & Mfg. Co.; A. H. Dittmer, Dittmer Gear and Manufacturing Corp.; J. E. Echlin, Echlin Manufacturing Company; C. B. Johnson, Precision Parts Company; Neil A. Moore, Dana Corporation; E. J. Muldoon, New Britain Machine Co.; G. Z. Spencer, Trico Products Corporation; and W. M. Stuart, The Martin-Senour Company.

Business Guide



for
1956



By Marcus Ainsworth, Statistical Editor

BUSINESS activity for 1955 was marked by steady increases throughout the year to the extent that many new records were established. By the end of the third quarter of 1955, for example, Gross National Product had reached the unprecedented height of an annual rate of \$391.5 billions.

GNP Increases

As compared with the same period of 1954 this is an increase of \$32.7 billions over that annual rate of \$358.8 billions.

From table (right) one can readily observe the increases that have taken place each year since the end of World War II except for the

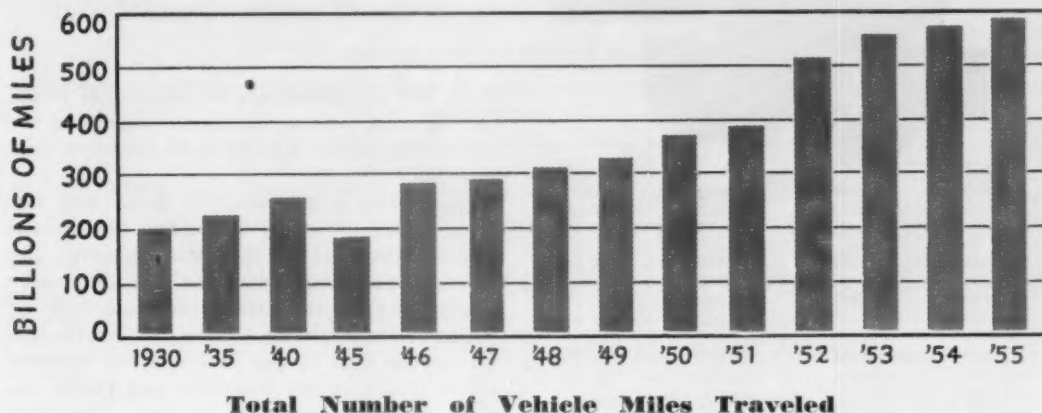
minor recession during the early part of 1954.

Period	Total Gross National Product
1946	\$209,200,000,000
1947	232,200,000,000
1948	257,300,000,000
1949	257,300,000,000
1950	285,100,000,000
1951	328,200,000,000
1952	345,200,000,000
1953	364,500,000,000
1954	360,500,000,000
1955 (Est)	386,000,000,000

It is fully expected that G.N.P. during 1956

1955!

Biggest Year in Automotive History



will not only equal that of 1955, but it is quite possible that it may reach between \$400.0 and \$405.0 billions.

Employment

The upward trend in gross national product has been closely paralleled in the employment and income data. Employment has risen to record levels with 64.8 millions on the payrolls during November, 1955, as against 61.7 millions for the same period of 1954. While employment has been steadily increasing, unemployment has been declining to the lowest levels since the Korean police action. A slight increase in unemployment was observed in November as compared with October but this was purely seasonal in nature.

Period	Employment	Unemployment
1949	58,710,000.....	3,395,000
1950	59,957,000.....	3,142,000
1951	61,005,000.....	1,879,000
1952	61,293,000.....	1,673,000
1953	62,213,000.....	1,602,000
1954	61,238,000.....	3,230,000
1955 (Est)...	65,561,000.....	2,674,000

It should be recorded that the decline in

unemployment on a monthly basis during 1955 has been considerable, as shown below, but this is not reflected in the annual average due to the high rate of unemployment during the first quarter of the year.

1955 Unemployment by Months

January ...	3,347,000
February ..	3,383,000
March	3,176,000
April	2,962,000
May	2,489,000
June	2,679,000
July	2,471,000
August	2,237,000
September .	2,149,000
October ...	2,131,000
November .	2,398,000

The rise in employment is reflected in marked increases in the total personal income which rose nearly 93 billion dollars between 1948 and September, 1955. During this same period of time per capita personal disposable income has risen from \$1,279 to \$1,640 as illustrated

(Continued on page XII)

Business Guide



Jobber Sales

in the accompanying table immediately below:

	Total Personal Income	Per Capita Income
1948	\$208,700,000,000	\$1,279
1949	206,800,000,000	1,261
1950	227,100,000,000	1,359
1951	255,300,000,000	1,465
1952	271,100,000,000	1,508
1953	286,200,000,000	1,568
1954	287,600,000,000	1,569
1955 (Est) ..	301,100,000,000	1,622

Population is showing marked increases jumping from 146,631,000 in 1948 to 166,022,000 in October, 1955. But most important of all, those in the age bracket of 21 years and older which represent the buying public have registered a substantial gain from 96,670,000 in 1950 to an estimated 103,112,000 as of July 1, 1955.

Department Store Sales

Department store sales, an excellent indicator of consumer buying, are at the highest point ever attained, with an index of 123 (based on 1947-1949 = 100) for November as compared with 113 a year ago. The 1955 average should be around 119 or 120 which is 8 to 9 points above the 1954 yearly average.

All these indicators of strong business activity which at present give every indication of extending into 1956 due to increased consumer demand and expenditures for expanded

plant and equipment, are to our way of thinking the most logical reasons for expecting the automotive industry to have an excellent year in 1956.

Automotive jobber sales of goods and services during 1955 will be around 13 per cent greater than 1954 for the entire country. The greatest percentage increase in automotive wholesaling was recorded in the South Atlantic region followed closely by the East North Central states with 17 per cent and the Western states including the Mountain and Pacific regions with a 16 per cent increase. The West South Central region, while showing a gain over 1954 was below the average for the country with a 6 per cent increase. The Middle Atlantic and the West North Central regions are 9 and 10 per cent respectively above 1954 in sales of goods and services.

Registrations

The Automotive Service industry depends for its livelihood, upon the number of motor vehicles in use and the number of those vehicles which are in the age bracket that require major repairs. During 1955 registrations of motor vehicles rose well above all expectations to the new-all-time high of 61,309,000. This was a 5.7 per cent increase over registrations in 1954, when 58,020,000 vehicles received license plates. Each year MOTOR AGE conducts a survey amongst the various states in order to bring you this forecast of the number of cars, trucks and buses registered, and it is from this annual survey that are obtained the above figures. All states cooperated with us in furnishing actual data for the major portion of the year and their estimate for the remainder of the year.

Of the 61,309,900 registrations, 51,025,000 will be passenger cars, up 5.9 per cent over 1954. Trucks and buses will be past the ten

(Continued on page XIV)

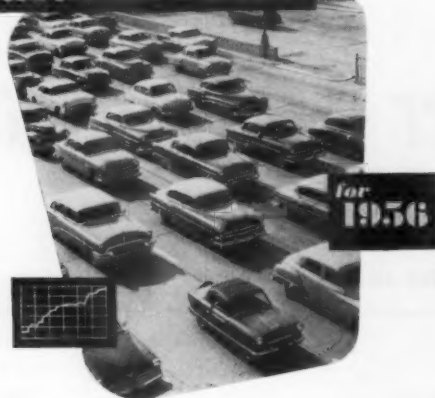
Up 13% in 1955 over Previous Year

Distribution Outlets and Registrations by States

All counts are as of the end of 1955

STATE	RETAIL OUTLETS			REGISTRATIONS		
	Car and Truck Dealers	Independent Repair Shops	Total Retail Outlets	Passenger Cars	Trucks and Buses	Total Motor Vehicles
Alabama	603	764	1,367	757,000	175,000	932,000
Arizona	227	704	931	310,000	85,000	395,000
Arkansas	557	683	1,240	380,000	179,000	559,000
California	2,221	7,684	9,905	5,300,000	740,000	6,040,000
Colorado	474	1,011	1,485	540,000	157,000	697,000
Connecticut	569	1,133	1,702	750,000	108,000	858,000
Delaware	104	280	384	113,000	29,000	142,000
District of Columbia	86	235	321	173,000	22,000	195,000
Florida	709	2,109	2,818	1,320,000	232,000	1,552,000
Georgia	833	1,062	1,895	955,000	234,000	1,189,000
Idaho	370	463	833	240,000	89,000	329,000
Illinois	2,707	4,559	7,266	2,849,000	408,000	3,257,000
Indiana	1,411	2,184	3,595	1,430,000	298,000	1,728,000
Iowa	1,440	1,574	3,014	950,000	211,000	1,161,000
Kansas	1,120	1,127	2,247	809,000	252,000	1,061,000
Kentucky	796	926	1,722	806,000	211,000	1,017,000
Louisiana	561	601	1,162	725,000	198,000	923,000
Maine	371	568	939	252,000	75,000	327,000
Maryland	469	1,082	1,551	760,000	155,000	915,000
Massachusetts	1,138	1,849	2,987	1,345,000	181,000	1,526,000
Michigan	1,772	3,501	5,273	2,671,000	368,000	3,039,000
Minnesota	1,574	1,932	3,506	1,115,000	237,000	1,352,000
Mississippi	657	422	1,079	405,000	195,000	600,000
Missouri	1,209	1,757	2,966	1,180,000	290,000	1,470,000
Montana	449	485	934	230,000	97,000	327,000
Nebraska	765	893	1,658	498,000	148,000	646,000
Nevada	106	163	269	92,000	27,000	119,000
New Hampshire	252	316	568	170,000	37,000	207,000
New Jersey	1,355	3,500	4,855	1,665,000	235,000	1,900,000
New Mexico	257	557	814	245,000	87,000	332,000
New York	2,849	7,589	10,438	3,880,000	680,000	4,560,000
North Carolina	1,002	1,306	2,308	1,100,000	261,000	1,361,000
North Dakota	553	384	937	204,000	94,000	298,000
Ohio	2,212	3,747	5,959	3,060,000	400,000	3,460,000
Oklahoma	879	1,050	1,929	750,000	250,000	1,000,000
Oregon	523	1,250	1,773	724,000	86,000	810,000
Pennsylvania	3,009	6,733	9,742	3,220,000	570,000	3,790,000
Rhode Island	182	525	707	265,000	39,000	304,000
South Carolina	456	650	1,106	590,000	130,000	720,000
South Dakota	516	433	949	243,000	85,000	328,000
Tennessee	725	955	1,680	945,000	218,000	1,163,000
Texas	2,547	3,606	6,153	3,050,000	782,000	3,832,000
Utah	226	569	795	260,000	60,000	320,000
Vermont	191	239	430	120,000	16,000	136,000
Virginia	959	1,281	2,240	1,032,000	217,000	1,249,000
Washington	729	1,956	2,685	925,000	210,000	1,135,000
West Virginia	542	732	1,274	394,000	111,000	505,000
Wisconsin	1,727	1,513	3,240	1,110,000	264,000	1,374,000
Wyoming	230	224	454	118,000	51,000	169,000
Total	45,239	78,866	124,105	51,025,000	10,284,000	61,309,000

Business Guide



for
1956

million mark with 10,284,000 registrations—an increase of 4.4 per cent. California will be the leading state with 6,040,000 registered vehicles, followed by New York with 4,560,000 and Texas with 3,832,000. Pennsylvania will be in fourth place with 3,790,000. Ohio, Illinois, Michigan, New Jersey, Indiana and Florida will be in fifth to tenth place in the order named. These ten states will have combined registrations of 33,158,000 or 54 per cent of all those in the entire country.

Regionally the Pacific Coast states will show the greatest percentage increase with an anticipated 7.50 per cent over 1954. Following closely is the West South Central region with a 7.3 per cent gain. The South Atlantic and East South Central regions will be about on a par with percentage increases of 6.6 and 6.7 respectively. The New England states will be up only 4 per cent over 1954.

Major Repair Group

Included with the 51 million registered passenger cars there are about 23¼ million in the age bracket of four to nine years inclusive. This is nearly double the 12,700,000 in the same age bracket for 1953 and close to five million more than the 18.6 million in 1954. In addition to this 23,250,000 cars needing major repairs there were approximately 18,000,000 cars under four years of age which are a very important factor to the service industry. Many of these will need tune-up, body and fender work, brake

Pacific Coast

relining, spark plugs, points, batteries and many other items. While it is expected that the number of cars in the major repair group will decrease slightly to around 22,500,000 in 1956, those under four years of age will increase materially in number to around 20,300,000.

Significantly, while registrations and the potential market for repair service has been materially increasing, distribution outlets have not been changing at the same rate. Automotive wholesaler establishments number approximately the same as last year, about 9485. Car and truck dealers have decreased by about 500 to 45,239 establishments, but independent repair shops have increased by 1000 to 78,866. All retail outlets show a gain of approximately 550 establishments. These slight changes in the number of retail outlets, combined with greatly increased registrations imply a much expanded potential for repair service business per establishment.

Production

Motor vehicle production during 1955 exceeded all previous records with passenger cars falling just short of 8,000,000 at about 7,950,000. The previous high for cars was in 1950 when 6,665,863 were produced. Truck and bus production during 1955 was in the neighborhood

U. S. Motor Vehicle Registrations

	Passenger Cars	Trucks and Buses	Total Motor Vehicles
1955.....	51,025,000	10,284,000	61,309,000
1954.....	48,167,554	9,852,816	58,020,370
1953.....	46,251,460	9,343,274	55,594,734
1952.....	43,323,355	9,122,797	52,446,152
1951.....	42,123,278	8,834,741	50,958,019
1950.....	39,952,969	8,318,721	48,271,690
1949.....	36,235,930	7,770,852	44,006,782
1948.....	33,011,780	7,490,343	40,502,123
1947.....	30,482,007	6,754,256	37,236,263
1946.....	27,834,543	5,858,813	33,693,356

Shows Greatest Gain in Registration

of 1,250,000 giving a combined total of motor vehicles of 9,200,000 or 15 per cent more than the previous high of 1950 when 8,003,056 cars, trucks and buses were produced.

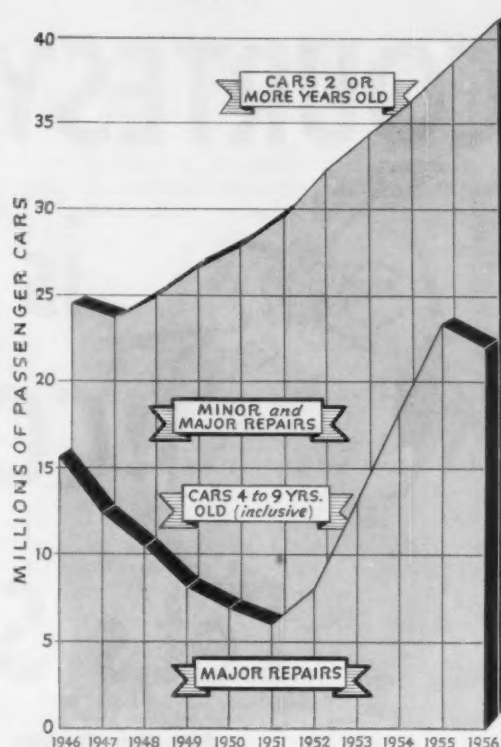
The most optimistic predictions for 1956 are that production will about equal that of 1955. However, the more conservative element are talking 7.2 to 7.6 million cars and around 1.2 million trucks. It is my personal opinion that car production could easily decline to between 6.5 to 7.0 million, or approximately the same as 1950. In any event, whether car production is 6.5 or 7.6 million, 1956 will no doubt be the second best year in history of the automobile industry.

New Registrations

Domestic sales to the consumer as recorded by new car registrations for 1955 will be close to 6,500,000. New truck registrations will approximate about 900,000 units which added to new car registrations gives a grand total of 7,400,000 new vehicle registrations. All sections of the country recorded substantial gains in new car registrations with an increase at the end of ten months of 33.4 per cent. The Pacific Coast states, however, show the greatest increase over any other section of the country with a 59 per cent gain in 1955 over comparable period of 1954. The South Atlantic States are up about 40 per cent followed closely by the Mountain states with 38 per cent. The West North Central states of Iowa, Kansas, Minnesota, Missouri, Nebraska and North and South Dakota recorded the least geographical section gain with 18.7 per cent. Other sections of the country are up from 21 to 33 per cent.

Good business should continue to prevail throughout 1956. The economy of the country remains at a very high level with no prospect in sight for a general decline. While a presidential election year is apt to bring to the minds of some people a state of uncertainty,

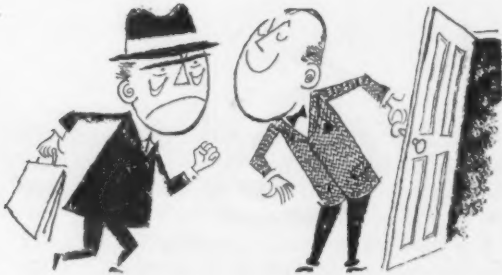

**Serviceable Cars in Use
by Age Groups**



on the other hand it is a political expediency to stimulate government action to keep the boom economy rolling. Except for a few spotty sections throughout the country, employment is maintaining its extremely high level. Personal incomes will continue to climb and the consumer will continue to demand additional goods and services. While it is extremely unlikely that the automotive industry will repeat the boom of 1955 in 1956, nevertheless this year should be the second best in its history with resulting excellent business for the manufacturer, the jobber, the car dealer and the repair service industry.

One to Remember

(FOR YOUR BULLETIN BOARD)

COURTESY  **is**  **CONTAGIOUS**

**Let's Start an
EPIDEMIC**



*On the Sunny Side
Chrysler Dealer Bonus Plan
The Meter Harvest
Gas Turbine Firebird II
Crawford Leaves Pontiac
Summer Debut for Brougham
An Efficient Lube System*

Car Men See the Sunny Side

AUTOMOTIVE INDUSTRY ESTIMATES on new car production this year range from about 7.2 million to 7.6 million, a 5 to 10 per cent decline from 1955's record 7.975 million, but still the second highest year in history. Truck output should run about 1.2 million.

CAR FACTORY OFFICIALS ARE MORE OPTIMISTIC than bankers, finance men, some suppliers, and business analysts. Historically, car builders have been more optimistic and more accurate than non-industry forecasters.

Farming Out Service Work

THE AUTOMOTIVE MAINTENANCE ASSOCIATION of Michigan has been discussing with its members the advisability of independent repair shops contracting with automobile dealers to handle excess service work.

AMA WILL NOT OFFICIALLY SPONSOR such a program but will assist members who would like to make an individual deal, according to Jack Spath, president.

FACTORIES TAKE A DIM VIEW of dealers farming out service to independents, but have no particular objections to contracting for body work or used car reconditioning if the dealer has no facilities.

AM Cuts Losses

AMERICAN MOTORS SHOULD BE in a much better profit position this year. It absorbed all possible tooling and integration costs into its 1955 fiscal year with the result that it showed a loss of \$6.9 million, which was \$4 million lower than the previous year.

Dealers Benefit in New Agreements

NEW CAR DEALERS PROBABLY WILL MAKE a little headway this year with factories on franchise agreements. In fact, starting in December General Motors and American Motors both liberalized their selling agreements, GM by extending contracts to five years and AM by granting dealers more voice in writing agreements.

Dealer Bonus Plan Revealed

CHRYSLER CORPORATION HAS INSTITUTED a volume bonus plan for its dealers, to stimulate sales effort. Counted from the beginning of the 1956 model year, Plymouth now gives a rebate of \$7.50 for each car sold after the 149th sale. Dodge bonus is \$12 and DeSoto is \$18.

The Fire-Bird II—By Remote Control

EXPERIMENTAL FIREBIRD II will be featured at the General Motors Motorama which opens in New York January 19. The car is a gas turbine model equipped with electronic controls for automatic highway control.

GM'S CONCEPT OF SAFE HIGHWAY DRIVING involves copper strips placed in limited access highways. Electronic impulses picked up by the car would control its direction, speed, braking and other traffic movement.

THE CAR IS EQUIPPED with television, two way radio telephone and radar to apply brakes if obstacles loom up ahead. The electronic highway would space cars, regulate speed, and shift cars from the approach lanes to low speed and then high speed lanes.

Cities Reap Meter Harvest

CAR PARKING METERS ARE GIVING much greater benefit to city governments than to downtown business houses. Meters take in over \$90 million a year, or about \$70 per meter, figures the American Automobile Association.

THE CHIEF TROUBLE WITH THIS INCOME, says the AAA, is that more than half the money goes into general funds. Less than 10 per cent is being spent for new offstreet parking lots and buildings.

American Motors' Dealer Policy

DEALER POLICIES NEWLY STATED by the American Motors Corporation are praised by the National Automobile Dealers Association. The thought behind these policies, says the NADA, will help promote loyalty between the firm and its dealers.

THE POLICY STATEMENT PROVIDES DEALER-ELECTED COUNCILS to advise on such points as the length of a franchise. The company also promises joint action to keep advertising and sales methods up to high standards.

New Ford Line to Come in Late 1957

FORD'S NEW LINE OF PASSENGER CARS as yet unnamed, will appear not earlier than late 1957. It will fall between Mercury and Lincoln to complete Ford's across-the-board competition with GM.

AN ENTIRELY NEW DEALER body will be required since the company undoubtedly will set up a separate division to produce and sell the car.

The New American Motors V-8

AMERICAN MOTORS WILL NOT USE its forthcoming new V-8 overhead valve engine in either its highest priced lines or in the Rambler for some time.

THE NEW POWER PLANT will go initially only into the Nash Statesman and Ambassador. It has just tooled a new overhead valve 6-cylinder engine for the Rambler and plans to continue to use that exclusively, at least for some time.

Crawford Leaves Pontiac

HOWARD E. CRAWFORD HAS RESIGNED as Pontiac general sales manager because of illness. He is succeeded by Frank V. Bridges who had been assistant general sales manager of Buick since 1950.

Brougham Bows Next Summer

CADILLAC EXPECTS TO INTRODUCE its Brougham next summer as a direct competitor to the Continental. It will look similar to the 1955 Motorama show model except that the rear quarter panel will be changed to the tail fin styling of the Eldorado.

THE CAR WILL BE A FIVE-PASSENGER SEDAN with a tentative price of about \$8500. It will have some interesting mechanical features, in relation to door openings and seat arrangement, but will not be "pressurized."

THERE ALSO IS A POSSIBILITY that it may have the controversial dual headlamp arrangement which has caused some furor in the industry because it upsets an industry agreement on multiple lighting.

Multi-Luber More Efficient

FORD AND CHEVROLET DEALERS, from coast to coast, as well as other automotive service retailers, are being signed up through wholesalers to stock, sell and install Multi-Luber systems in complete kit packages. The Multi-Luber System is the product of Lincoln Engineering Company, St. Louis.

THE LUBRICANT USED FOR APPLICATION by the Multi-Luber System is not an oil, but a specially compounded lubricant. Five major oil companies have developed a special lubricant exclusively for use by the Multi-Luber.

WITH THE MULTI-LUBER SYSTEM it is possible to determine that each individual fitting is taking lubricant. The System includes a green signal light which illuminates when the lubrication cycle is complete. It will not light up if any fitting is not receiving lubricant.

Washington Wireby Ray M. Stroupe



Safe-Driving Dents Death Toll

CAREFUL DRIVING PUT A THREE-WEEK DENT in the rising trend of traffic deaths last year. From November 21 through December 10, there were 2,069 fatal accidents, or 75 fewer than in the matching period of 1954.

ON SAFE-DRIVING (S-D) DAY ITSELF, December 1, fatalities numbered 89, compared with 81 on S-D Day in 1954. But 21 states and the District of Columbia had no fatal accidents at all, and six other states had fewer than in 1954.

Price Cuts Alone Won't Keep Customers

UNDERCUTTING THE COMPANY DOWN THE BLOCK won't cure price wars. C. J. Guzzo, a Gulf Oil Corporation vice president, stated this before the Senate Small Business Subcommittee recently.

THE EXECUTIVE ALSO HELD THAT if you meet the competitor's price he may finally realize he can't get steady customers merely by price cuts.

PRICE WARS AREN'T STARTED by any supplier's plan, he contended. A dozen oil industry officials testified before the subcommittee.

Governments Get Finger in Oil Tax Pie

SALES OF GASOLINE, OIL, AND GREASES produce nearly \$6 billion in government taxes each year, the American Petroleum Institute reports. National, state, and local governments are getting in on these revenues.

THE AVERAGE TAX ON FINISHED CRUDE OIL products was \$2.02 a barrel in 1954 and was still climbing last year. In January-June, 1955, federal taxes alone on gasoline, diesel fuel, lubricants, and pipelines topped \$1 billion.

New Franchise Law Sought

SENATOR O'MAHONEY, D., WYOMING, has been worrying aloud about agreements between manufacturers and retailers. He is to speak on January 30 at the National Automobile Dealers Association convention.

HE FEARS THAT FRANCHISES give producers too much control over sellers. The senator hints at a law that would strictly govern all franchise tie-ups. Such a law, he suggests, might apply to the auto industry, as well as other fields.

Big or Small, They'll Thrive in '56

SMALL OPERATORS AND BIG ONES ALIKE are to have a prosperous year, reports to the government disclose. Asking more than 600 businessmen for their forecasts, the Small Business Administration finds three out of four think 1956 will be equal to or better than 1955.

THE RATE OF BUSINESS FAILURES, down to 42 of every 10,000 firms last year, is expected to drop lower. The average rate over the past 55 years was 71 of every 10,000.

Prospects for More Credit

TWO-CAR FAMILIES ARE EYED with more interest by federal officials. A private firm reports these families, with incomes averaging \$7,000 a year, have high credit standing.

TO THE OFFICIALS, this fact means the second car is being bought in installments. They reason that the buyers will be willing to use installment terms to get a variety of other consumer goods.

Private Shops to Get More Gov't Work

GROWTH OF THE GOVERNMENT CAR POOL program is to mean a larger share of repair business for commercial service shops. The expense of running big repair shops with public funds is to be saved.

THIS PROGRAM, ALREADY UNDERWAY, includes a plan to replace many older, more expensive cars with new ones in lower price ranges. When the program is farther along, nationwide savings are to total at least \$5 million a year.

Use Ad-Allowances for Ads, Directs FTC

WHAT RETAILERS DO WITH ADVERTISING allowances from manufacturers is causing the Federal Trade Commission concern these days. The agency threatens action against manufacturers whose customers don't use all their allowances for advertising.

IT DOESN'T MATTER IF SOME RETAILERS save money by getting lower ad rates than others. FTC directs manufacturers to see that all allowances are spent in keeping with the terms offered.

Report to Our Readers



A New Life Begins

THIS handsome, new-born business year is here and we've all got new resolves to make the most of chances for economic growth. Fundamentally there is one rule for making money in this or any other retail business. The rule reads *Availability of merchandise and, the Merchandising of your service to the car owning public.*

Follow these in proper balance and you stand to make 1956 a prosperous ride on the Streetcar Named Opportunity.

January Is Plantin' Time

SPRINGTIME is generally considered as plantin' time for the farmer, but in automobile retailing and servicing, January is plantin' time.

This is the time to sow selling seeds to harvest a full year's profit. Take inventory of your customers. Count noses of all your prospects and people whose cars you serviced and make sure that they return to you when more service is needed, and if they don't, find the reason why.

Study this Automotive Service Ideas issue which the editors of MOTOR AGE prepare each year especially for our readers. We've planned these pages to help you modernize your shop equipment and tools and to bring to your attention what's new in replacement parts, accessories and supplies. This special section begins on page 56. Read 'em and reap.

'56 Outlook Appears Sound

SOMEWHAT breathless from its record-setting year in 1955, the automobile business starts the new year with a high order of con-

fidence. While there are a few extreme optimists who say 1956 will be as good as last year, a majority opinion is taking a little more realistic view, and is looking for the second highest year in history with production and sales off possibly 5 to 10 per cent. This would add up to about a 7.2 to 7.6 million car production year and sales in the neighborhood of 6.8 million; truck output should be about 1.1 to 1.2 million units.

It is possible, of course, that the industry may repeat its 1955 performance, particularly in the light of what happened last year when all forecasts at the beginning of the year were far below what was actually achieved.

Difference of Opinion

Most optimistic views are expressed by some of the automobile company officials, while other business forecasters including bankers, finance company officials, economists, business analysts, and some of the suppliers are more conservative.

Reasons for the majority opinion that sales and production will be off somewhat this year include a noticeable stickiness that developed in sales of 1956 models in the last quarter of 1955, a moderate tightening of credit which admittedly had been stretched a bit beyond sound limitations during part of last year, higher prices for the new models, and the possibility that buyers who normally would have put off buying a new car until this year were induced to buy in 1955.

Faithfully yours,

Frank P. Tighe

EDITOR



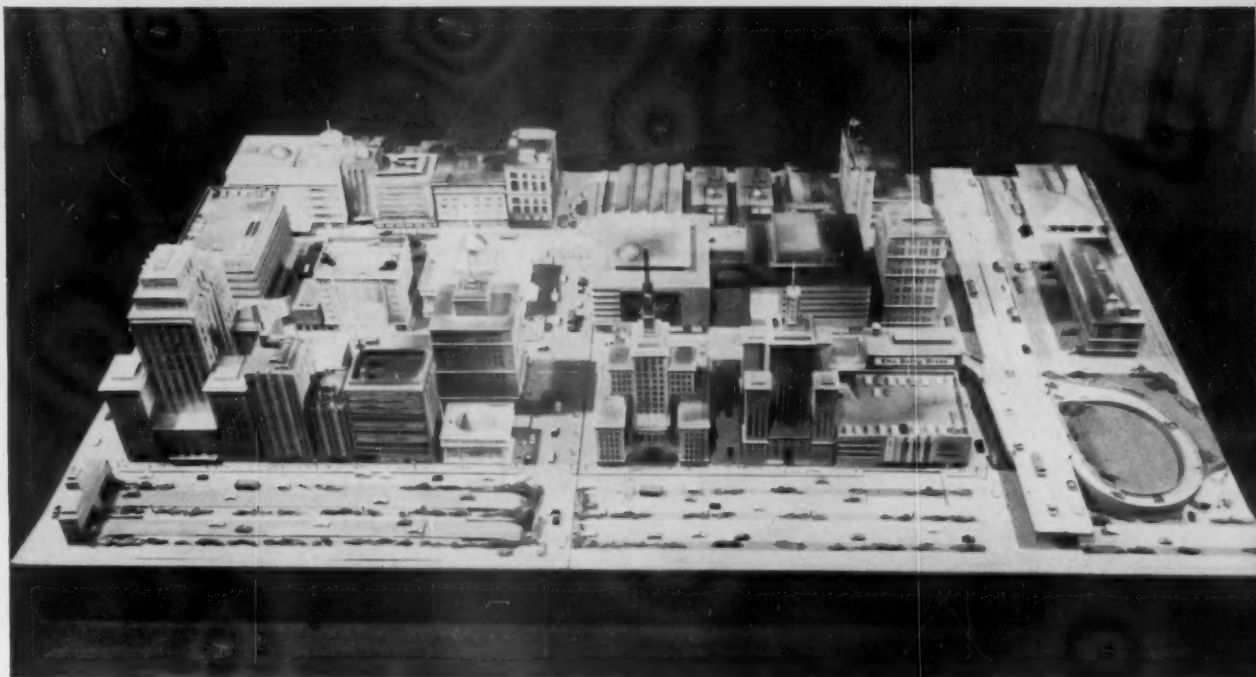
If city and cross-country bus traffic disrupts traffic flow, a systematic bus-routing plan can be shown.



TRAFFIC CITY" is the name applied to the interesting scale model depicted on these two pages. The model was developed to stimulate public interest in highway modernization and improvement programs throughout the country. In particular it was developed to aid interest in President Eisenhower's \$106 billion highway program through the scale model's ap-

Removing the roof of one of the model's buildings to demonstrate a point in underground parking plans.





Overall view of "Traffic City." Note entry loop at right for reaching city's "through traffic" route.

pearance on network and local TV programs.

Designed in accordance with recommendations of staff engineers of the Automotive Safety Foundation, "Traffic City" will be presented and discussed in cities throughout the nation to illustrate how the special traffic problems of each particular community can be solved.



If on-street parking poses serious problem, various methods of upping parking facilities—such as underground or roof-top parking—can be demonstrated.

◀ If truck deliveries are blocking traffic lanes, it can be shown how off-street access roads and underground truck deliveries can ease the traffic burden.



Horsepower

Presenting a table of comparative data on 1956 passenger car engines. As the number of V-8 power plants has grown so large, table stresses only highest horsepower V-8 of each car model

ADVERTISED horsepower and torque ratings have hit new highs this year, with the Packard Caribbean at 310 hp and Cadillac Eldorado at 305 hp. This answers the question asked frequently last year—"How high are they going?" There still remains the question—how high can they go, considering the ratings now on the record?

We remind our readers once again that in 1950 only Cadillac and Packard Custom models had ratings of 160 hp; while the Buick Roadmaster and Lincoln boasted 152 hp. This year with the widespread availability of the so-called "power packs"—which include four-barrel carburetors—Chevrolet and Plymouth offer 205 and 200 hp respectively, while the standard Ford Thunderbird engine is rated at 202 hp. Just by comparison with 1955 ratings, the power-packed Big Three models exceed the ratings of all but the high priced cars featured last year. For a quick comparison refer to Table 1, page 48, *AI*, February 1, 1955.

Tremendous Growth

The number of V-8 engines, together with various options, has grown so large that the current study not only is restricted to V-8's but we have elected to list only the highest advertised options for each engine. Consequently, the

tabulation lists the ratings only for power-pack options where these are available. Even so, the tabulation covers 32 engines.

Perhaps the most important news is that all passenger car engines, including the sixes which are offered as usual, have adopted the 12-volt electrical system. Consequently, this year for the first time marks the complete passing of 6-volt system, with 12 volts standard for the industry. This must be good news indeed for producers of electrical equipment who will now enjoy the benefits of volume production.

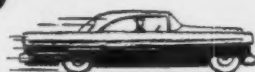
High Torque Ratings

High torque ratings are emphasized even more this year. It has become recognized that high performance, particularly with respect to acceleration and passing ability, is more a function of high torque at low speed than top horsepower ratings at top speeds emphasized heretofore. In fact, a number of manufacturers found it desirable to increase engine displacement—either by increasing the bore or increasing both bore and stroke—to effect better torque ratings this year.

In cases where the stroke was increased the bore/stroke ratio was reduced a few percentage points below unity. This contrasts with last year's tabulation in which all V-8 engines were considerably over square.

By Joseph Geschelin
Engineering Editor

and Torque Ratings



COMPARATIVE DATA . . . 1956 OHV V-8 PASSENGER CAR ENGINES

	BHP (max)	Displacement (cu in.)	Ratio Bhp/cu in.	Torque (lb ft)	Compression Ratio	Bore/Stroke Ratio	Ratio Torque/cu in.
1. Cadillac Eldorado	305	365	0.836	400	9.75	1.10	1.096
2. Packard Caribbean	310	374	0.829	405	10	1.18	1.083
3. Buick Series 50, 60, 70	255	322	0.792	341	9.5	1.25	1.059
4. Chrysler New Yorker	280	354	0.791	380	9	1.08	1.073
5. Imperial	280	354	0.791	380	9	1.08	1.073
6. Golden Hawk	275	352	0.781	380	9.5	1.14	1.080
7. Cadillac	285	365	0.781	400	9.75	1.10	1.096
8. Packard	290	374	0.775	405	10	1.18	1.083
9. Lincoln	285	368	0.774	401	9	1.09	1.090
10. Chevrolet	205	265	0.774	268	9.25	1.25	1.011
11. De Soto Fireflite	255	330.4	0.772	350	8.5	0.97	1.059
12. Chrysler Windsor*	250	331	0.755	340	8.5	1.05	1.027
13. Olds 98 and Super 88	240	324	0.741	350	9.25	1.13	1.080
14. Dodge Super Red Ram*	230	315	0.730	316	8	0.95	1.003
15. Studebaker President	210	289	0.727	292	7.8	0.98	1.010
16. Plymouth*	200	277	0.722	272	8	1.19	0.982
17. Mercury	225	312	0.721	324	9	1.10	1.038
18. Thunderbird	225	312	0.721	324	9	1.10	1.038
19. Pontiac*	227	317	0.716	312	8.9	1.21	0.984
20. Studebaker Commander*	185	259	0.714	260	7.8	1.10	1.004
21. Olds 88	230	324	0.710	340	9.25	1.13	1.049
22. Dodge Red Ram	189	270	0.700	266	8	1.11	0.985
23. De Soto Firedome	230	330.4	0.696	305	8.5	0.97	0.923
24. Ford Thunderbird	202	292	0.692	289	8.4	1.14	0.990
25. Buick Series 40	220	322	0.683	319	8.9	1.25	0.991
26. Clipper	240	352	0.682	350	9.5	1.14	0.994
27. Chrysler Windsor	225	331	0.680	310	8.5	1.05	0.937
28. Plymouth Belvedere	187	277	0.675	265	8	1.19	0.957
29. Ford	176	272	0.647	264	8.4	1.09	0.971
30. Pontiac	202	317	0.637	294	8.9	1.21	0.927
31. Hudson Hornet	220	352	0.625	320	9.55	1.14	0.909
32. Nash Ambassador	220	352	0.625	320	9.55	1.14	0.909

* Power package—4 bbl. carburetor.

Top Rating

Top rating of bhp/cu in. this year goes to the Eldorado engine with a ratio of 0.835, while the Packard Caribbean ranks second with a ratio of 0.828. Some impression of the gain in bhp/cu in. ratings this year may be visualized from the fact that the lowest rating last year was 0.571, whereas the lowest rating for '56 is 0.625.

Similarly, torque/cu in. has reached a higher plateau this year. Last year the top rating was 1.042, lowest rating 0.842.

Compression ratio has been stepped up sharply this year. Top rating goes to Packard with a ratio of 10 to 1, Cadillac being a close second with a ratio of 9.75 to 1. Statistically, the

(Continued on page 82)

Progress Report on IGO



**By Ralph James, Executive Director
Independent Garage Owners of America**

A look at the history and a review of the

IN any organization there are memorable events that serve as guide posts or milestones when it comes time to trace that organization's history and to report on its present day progress.

Nor is the Independent Garage Owners of America an exception. The roots of this unique organization may be viewed as going as far back as the first local garagemen's association. Its growth "above ground" as a sturdy and fast growing young tree may be viewed as recent as 1954.

In reporting then on IGO's present status and its progress in recent times we will trace briefly the early history and formation of this group.

Joint Action Needed

To begin with, it was evident to many of us years ago who were operating independent garages that something was hampering us both individually and as a collective segment of the automotive aftermarket. It was in short, our inability to take joint action against the problems and difficulties related to our field of business endeavor.

It was natural then that local garagemen's associations began to spring up. Initially these associations made progress in coping with their community's problems but in time, many of them either dissolved or curbed their activity as local problems were overcome.

But as this great nation of ours continued to grow industrially and as the registrations of

of America

present of this fast-growing organization

automobiles continued to zoom upwards—halted but temporarily by World War II—it was obvious that local problems would have much in kin with state problems and state problems would have great similarity with national problems as far as the independent garage owner was concerned.

Thus as state groups of garage owners began to hit their stride it would be expected that thought be given to the formation of a national group aimed at promoting the interests of garage owners and serving as a medium of exchange of ideas on common problems.

And now comes a milestone!

Important Meeting

At Joplin, Mo., on June 20, 1954, at a meeting of independent garagemen—representing associations from Arkansas, Missouri, Kansas, and Oklahoma—the national organization was conceived. Preliminary plans were developed at a subsequent meeting in Tulsa, Okla., on July 25 of the same year. At this time, delegates from California and Texas joined the delegates from the four states already mentioned.

The aims of the organization were to unite the independent automotive repair operator and affiliates in a nationwide association and to promote among its members a closer business, educational and social unity; to protect the members' interests; to encourage highest standard of ethics; and to foster harmonious relations with the motoring public.



Equally important aims adopted as the purpose of the organization were to improve the standards of automotive repairs, to assist in the organization of local and state units for affiliation with IGO of America, and to investigate pending legislation on automotive affairs as well as to advocate legislation in keeping with the best interests of the automotive industry and the motoring public.

Letter Writing Program

There started immediately after July the 25th, the biggest program of letter writing ever attempted by a group of independent garagemen. Temporary officers, Ralph H. James, Pres., Tulsa, Okla.; Ernie Welborn, Vice-Pres., Wichita, Kan.; W. R. (Pop) Mayfield, Sec., Little Rock, Ark., and Bert Cook, Treas., Dallas, Texas. These officers with the help of committees started out to locate all possible independent garagemen's associations, and to draft the temporary Constitution & By-Laws. Howard Eves of Pasadena, Calif., was one of the hardest working of all committeemen.

In Oklahoma City, January 14-16, 1955, forty-four delegates from those six states and Alabama, Louisiana, Massachusetts, Michigan and Ohio (11 in all) representing some fifty local and/or state organizations met to complete organizational plans. At this meeting the association was named, officers elected, the Constitution & By-Laws were drawn up and an executive director appointed. Local and state

(Continued on page 98)

Quick Service on the '56

The information in this article is designed to aid those responsible for accurate,

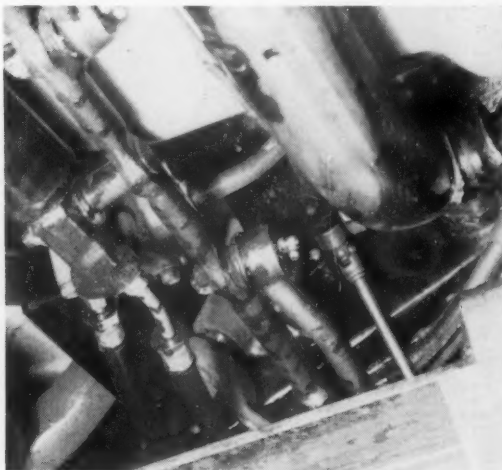
Editor's note: After you have read this interesting and informative article on "Quick Service on the '56 Ford," you'll want to turn to page 67 for the MOTOR AGE Shop Clinic Quiz. The Quiz is based on the contents of this article.

WHEN it comes to changing an oil filter on the new Ford either put the car on a lift or on stands. Turn wheels to the right as far as possible.

With a long extension and a universal socket, remove the filter bowl. Bowl is then worked out through the bottom of the car through the steering linkage.

Before installing the filter bowl, check to see if the two elongated holes in the oil filter anti-drain back diaphragm are in an upwards position. After cleaning the cylinder block filter recess, install a new gasket.

In removing the center bolt of the filter bowl, a long extension and universal socket can be used.



Place the filter assembly in position and thread the center bolt into the adapter and tighten with your fingers. Rotate the filter assembly slightly, in each direction, to make sure gasket is seated evenly. Then with universal socket tighten the center bolt to between 20 to 25 lbs-ft of torque.

Electrical: All 1956 Fords have 12 volt electrical systems with a negative ground.

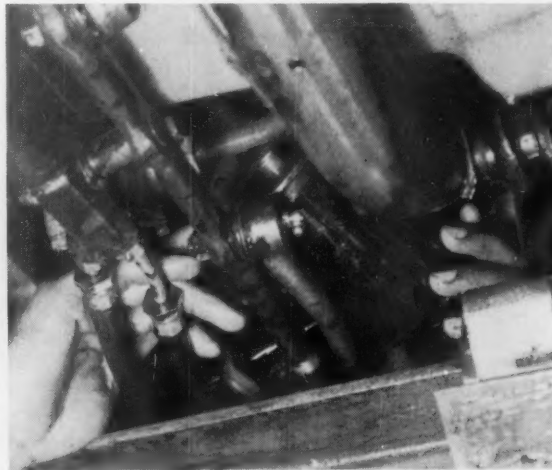
Timing: The damper has six timing marks. The long mark represents T.D.C. and each succeeding mark represents 2, 4, 6, 8, and 10 degree respectively, B.T.D.C. (Before Top Dead Center). Set initial timing at 6 degrees B.T.D.C.

Checking Timing

Disconnect the distributor vacuum line and connect timing light high tension lead to the number one spark plug (right side of engine)

(Continued on page 86)

After removing filter's center bolt, the filter bowl is eased down and through the steering linkage.



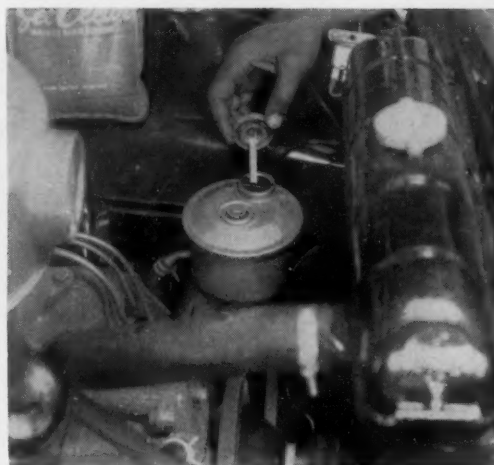
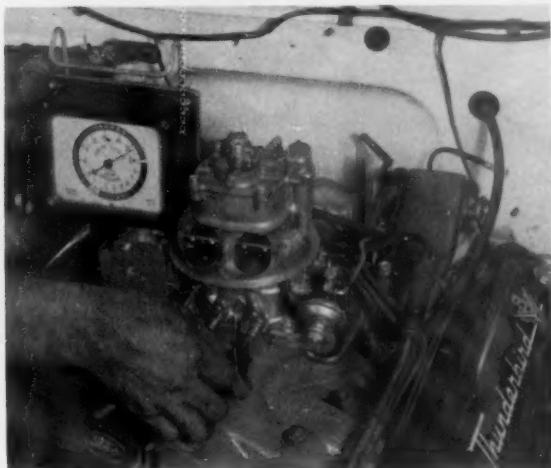
FORD V-8

fast adjustments on this popular engine



When testing compression, remove all spark plugs and block throttle wide-open while cranking engine.

Below: Vacuum gauge is connected to vacuum line of the fuel pump after removal of the air cleaner.



Above shows mechanic removing a dip stick from the power steering reservoir to check the oil's level.

Below: Spark plugs, are accessible from above. In installing plugs, torque to specs listed in table.



Studebaker's

High-Flying Hawks Reviewed

THE introduction of Studebaker-Packard Corporation's new line of volume produced sports-type cars during the closing weeks of 1955 has met with considerable interest. A closer look at the four models in this new series—the Hawk series—is well in order.

To begin with, each of the four sports-type models in the series is a five-passenger car. The designations of the four models are the Golden Hawk, the Sky Hawk, the Power Hawk, and the Flight Hawk.

Long and Low

The Hawk series cars are long, wide and low—17 feet long by almost 6 feet wide by 4 feet-8 5/16 inches high. Their radiator-type grille has the Studebaker crest placed in the upper left corner. The grille is flanked by two side air intakes.

The hood accents length, with an inbuilt air scoop of sports car type on top. Combination parking and directional lights are mounted atop the front fenders.

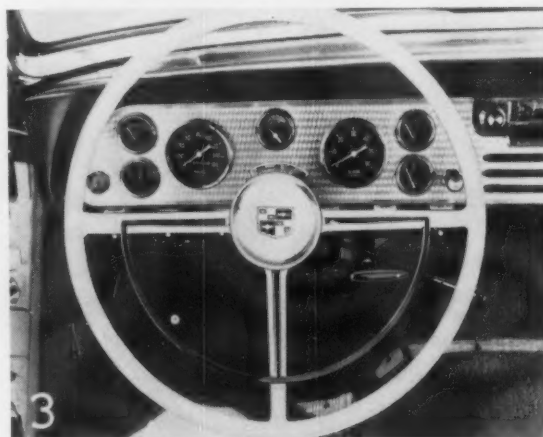
On the Golden Hawk, wheels are accented by stainless steel mouldings that outline the fender cutouts, and a ribbed aluminum trim band just above the body turnunder emphasizes body length. A rub rail extends from the headlamp bezel through the door and terminates in a chromed VEE check at the forward end of a tail fin running the length of the rear fender.

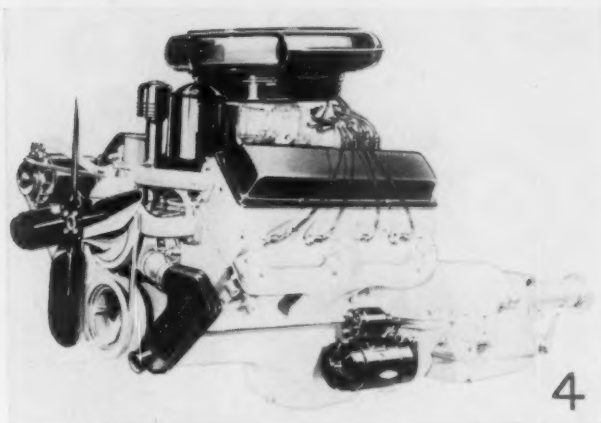
Radial dial instruments on the dash panels of all the sports-type models are of functional design inspired by Grand Prix race cars. The Golden Hawk panel includes, in addition to standard gauges, a tachometer, manifold vacuum gauge, and clock with a sweep second hand. The tachometer is optional at extra cost on the Sky

(Continued on page 92)

Volume produced line of sports-type cars make debut. Each of the four models in the Hawk series designed comfortably to carry five passengers

1. Golden Hawk is top model in Studebaker's special line of sports-type models for 1956.
2. Sky Hawk is one of two hardtops in Hawk line. Car's power plant has hp rating of 210.
3. Besides usual instruments, dashboard of Golden Hawk has tachometer, vacuum gauge.
4. Special 275 hp, V-8 engine of the Golden Hawk develops 380 lbs-ft torque at 2800 rpm.
5. Finned brake drum used on Golden Hawk provides greater air circulation for cooling.







Chevrolet's Classy Corvette

Power plant of this sleek two-passenger sport car attains

225 horsepower and lists a compression ratio of 9.25 to 1

MARKED by a restyled plastic body, the Chevrolet Corvette for 1956 has made its debut. In appearance the new Corvette can be quickly identified.

The body of the new Corvette carries a "sculptured" depression, extending rearward into the doors from the front wheel opening, that is reminiscent of the Biscayne, a Chevrolet experi-

mental car in the 1955 Motorama. This styling touch is chrome-outlined.

Bumpers Redesigned

Complementing these revisions in form, bumpers have been redesigned and the front fender lines strengthened. Also included are such other distinctive touches as front fender simulated air

scoops; full diameter and chrome-plated wheel covers with simulated knock-off hubs.

Although the new Corvette appears to be much longer and lower than previous models, specifications show that the overall length has been increased only about one inch, while most measurements remain unchanged.

Wheelbase is at 102 inches and height at the door 33 inches. With the solid top the overall height with driver and passenger is four feet, three inches, virtually matching the fabric top level when in the raised position.

Special Power Plant

The power plant has been developed exclusively for the Corvette. Furnishing 225 horsepower at 5200 rpm, it contains a special high lift cam and two four-barrel, eight-jet carburetors. Displacement measures 265 cu in., with bore at 3.75 in. and stroke at 3 in. Compression ratio is set at 9.25 to 1. Torque rates 270 lbs-ft at 3600 rpm.

Other engine high-spots include deep-ribbed cast-aluminum rocker covers, two buffed aluminum air cleaners, a new cylinder head, streamlined exhaust manifolds redesigned to cut back pressures and improve "breathing" and an optional full-flow oil filter attached at the rear of the crankcase.

In addition to a more powerful V-8, the Corvette lists as new a close ratio three-speed transmission, a redesign of transmission controls, a new rear axle, a coil-spring clutch, and optional racing-type tires.

The shift lever for both the standard three-speed transmission and the Powerglide is located on top of the floor tunnel between the two bucket-type seats. Connected directly to the transmission housing, much of the linkage

on previous models is eliminated.

Rear Axle Gear Ratio

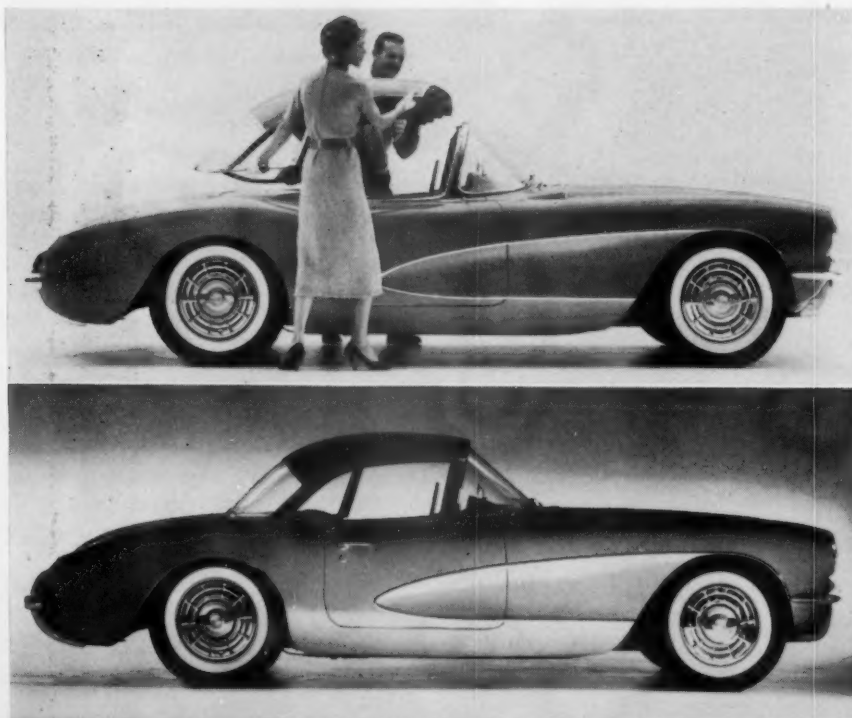
A rear axle gear ratio of 3.55 to 1 is used with both the standard Synchro-Mesh transmission and Powerglide. Ratio of 3.27 to 1 is optional for both transmissions.

Nine heat-treated coil springs pro-

Continued on page 94



On new Corvette bumpers have been redesigned, front fender lines strengthened.



Optional equipment is a solid plastic top that may be completely removed. Fabric top is standard and is raised or lowered by a dash control operation.

Mr. Dealer -

This One's For You

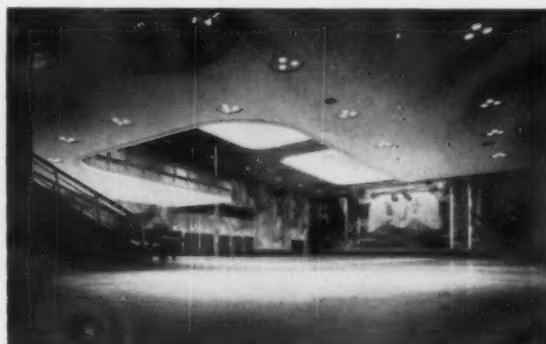
Distinguished speaker list—including U. S. Secretary of Commerce Sinclair Weeks and NADA President Frank H. Yarnall—heads up this vitally important convention



WEEKS



YARNALL



All convention sessions will be held in Sheraton Hall

THE annual Convention of the National Automobile Dealers Association to be held in Washington, January 27-February 1, 1956, comes at a most opportune time.

Congress will be settling down for a full program of legislation which has to be enacted before July 1, 1956. This legislation includes an all-important highway bill. Manufacturers excise taxes on new automobiles, trucks, parts and accessories must be considered this spring.

Laws Up For Revision

Present appropriations for the highway pro-

gram expire on June 30th. The present excise tax laws must necessarily come up for revision because the rates now in effect are scheduled to end April 1st.

Considerable interest is being shown for additional revisions in the minimum wage and hour provisions of the Fair Labor Standards Act. As you know, most automobile dealers are exempt from these provisions now. Last year extension of the coverage of wage and hours provisions of the FLSA received careful study by the Congress. There's good reason to believe that extended coverage will again be another



BY FREDERICK J. BELL
Rear Admiral, USN (Ret.), Executive Vice President, National Automobile Dealers Association

issue in this session of Congress.

There will be efforts to extend the benefits of the Social Security laws. No doubt tax reductions will be seriously considered in the next few months by the Congress.

Opportune Time

Yes, all of this means that the NADA Convention in Washington comes at a most opportune time.

All of the legislation cited above affects the nation's new car and new truck dealers.

That's why hundreds of dealers have already

registered for the 1956 Convention.

Of course, to us, the most important activities in Washington at the present time and, we believe, for some time to come, will be the two studies now being conducted by two separate subcommittees of the United States Senate.

Magnificent Job

The special Senate Judiciary Subcommittee has done a magnificent job in pinpointing serious problems in automobile marketing. These problems, as you know, come from what NADA has consistently called a "unilateral, one-sided selling agreement which gives the manufacturer control without responsibility."

As Senator Joseph C. O'Mahoney (D., Wyo.) emphasized continuously during the December hearings of the Judiciary Subcommittee the need for improved factory-dealer relations was never greater. "Something has to be done," he stated.

A second study of "all phases of automobile marketing" will be made by a subcommittee of the Senate Interstate and Foreign Commerce Committee. This subcommittee, headed by Senator A. S. (Mike) Monroney (D., Okla.) and including Senators Strom Thurmond (D., S. C.) and Frederick Payne (R., Me.), has been quietly, but effectively, gathering facts for the past nine months. I'm sure that they have unearthed many questions which must be answered. I'm sure that these dedicated men will find the answers to the questions they are asking.

No Exaggeration

I do not think it an exaggeration to say that 40,000 small businessmen look to these committees to prepare the wording of a Magna Carta of industrial relationships; a Bill of Rights that would give them a working climate which would make them, in truth, independent businessmen on a par with their fellows in other industries.

They look to these committees to take action that will restore their self-respect.

While it is true that laws cannot be passed which will change the hearts of men or amend their character, there are many laws on the statute books today that are designed to curb or cure inequities as between groups.

(Continued on page 96)



Successful Formula

Owner Tom Aton reports on his discovery of ingredients making for a successful marriage between the gasoline station and the garage

IN Tulsa, Okla., energetic Tom Aton offers a "One Stop Service" for customers in automotive repairs and adjustments. The exception is body and heavy engine repair work which he sublets.

Owner of Aton's Certified Service at 2705 East 11th St. in Tulsa—11th St. is part of Highway 66 that goes through Tulsa—Tom Aton says he thinks he has found the formula for the successful marriage of the filling station and the garage.

As Tom sees it, first on the list is a clean and attractive place of business. Secondly, well known merchandise. Thirdly, quality service and last but by no means least—good salesmanship.

Remodeled Twice

Tom's business location has been the same for

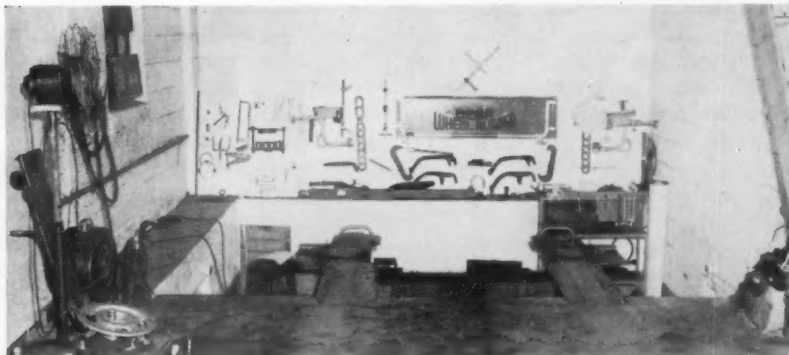
twenty-five years although he has remodeled his buildings and layout twice. The front of his property extends some 100 feet along Highway 66 or 11th St.

As his original service station progressed he found more and more of his net dollar volume coming from the garage part of his service.

Today the garage and repair shop accounts for more than 50 per cent of his net income.

He figures that an average of 12,000 gallons of gasoline is sold per month and Tom naturally stresses oil changes, lubrication and sales of replacement parts hand-in-hand with his gasoline sales.

Tom buys his parts from jobbers and while he does not advertise the fact that he has a mechanic on duty, the service salesmen in the Aton employ are the men charged with the responsibility of



Note tools and equipment arranged for quick service in the work bays.

for One Stop Service



Designation of different services like "Washing", "Brakes", "Tune-Up", "Wheel Alignment" is readily seen by customers.

selling motor tune-up, wheel alignment, brake jobs, and similar work.

Tom employs eight persons at his location. Five are service salesmen, two are mechanics, and one is the cashier and customer accounts control.

Generally speaking on an average work day you can expect to find, besides Tom, three service salesmen, the cashier and a mechanic on duty at any one time.

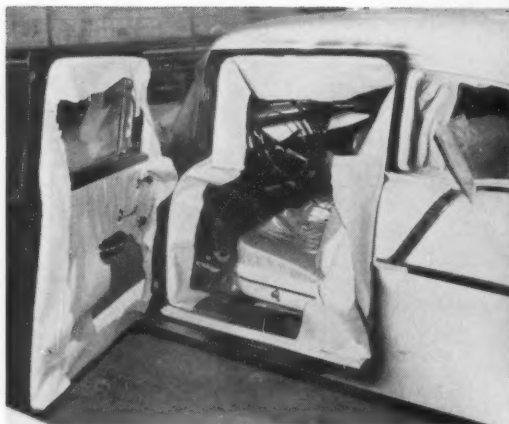
Unique Feature

A unique feature at Aton's Certified Service is the use of an intercom system from the driveway to the cashier's location. As a service salesman makes a sale, he calls the amount over the loud speaker to the cashier. This enables

(Continued on page 118)

Owner Tom Aton checks over accounts.





The first step in two-toning is masking and painting the door jams. Thorough protection of upholstery is of utmost importance while spraying here.

Wet sanding the area (upper right) to be refinished is the next step. No. 400 sandpaper provides a good, smooth surface for refinishing operations.



Two-Toning



Long strips of paper are being put into place to mask the rear window after wet sanding is completed. This job can be speeded with tape dispensers.

The body man is shown applying full coats of paint from the rear to the front of the roof. His face mask is an important safety measure for this job.



A long shot of the car shows it completely masked and ready for spraying. The dark outline around the door was left by previous spraying of the door jam.

Applying paint to the lower section. On this vertical surface the body man must use the proper spray pattern to prevent runs and sags on the final job.



The paint and sales departments combine their knowhow to sell and deliver cars with color combinations as desired by customers. Goodwill and profits result



Pleases Customers

ONE of the biggest sales tools in the new car market today is a dealer's offer to deliver any color combination desired, immediately. It can influence a customer to buy, on the spot, probably more quickly than any other feature offered in a car. As statistics have shown, new car buyers place extremely high importance on appearance. Women especially, for the most part, buy cars exclusively on the basis of color and styling.

Color Combinations Popular

Color combinations of the two and three tone variety have increased tremendously in popularity over the last three years. One car company

has reported that 93 per cent of its early 1955 production was made up of two color combinations. This is an increase of about 63 per cent over 1953. Other companies report increases that range not too far below this figure. Three color combinations make up 35 per cent of another maker's production for early 1955. If these statistics were added to the number of repaint jobs done at dealer shops it presents a good picture of the selling power of color.

Perhaps this growth will level out in 1956 but it will still remain a fact that "two toning pleases customers." It is done to help make the sale. This situation puts the body man in a position of working hand in hand with the sales-

man. With jam-ups apparent in many dealerships because of repaint orders, speed in the body shop is of utmost importance. At the same time, while the job must be turned out fast, it will only please the customer if it is done right.

Similar Principals

The principals of turning out a good two or three color job fast are basically the same as those followed in doing any other refinishing (Cont'd on page 114)

Completed and cleaned up this painted-to-order car is ready for delivery.





for JANUARY

Profit Growing Ideas

Plantin' Time

▼1. Spring Compressor

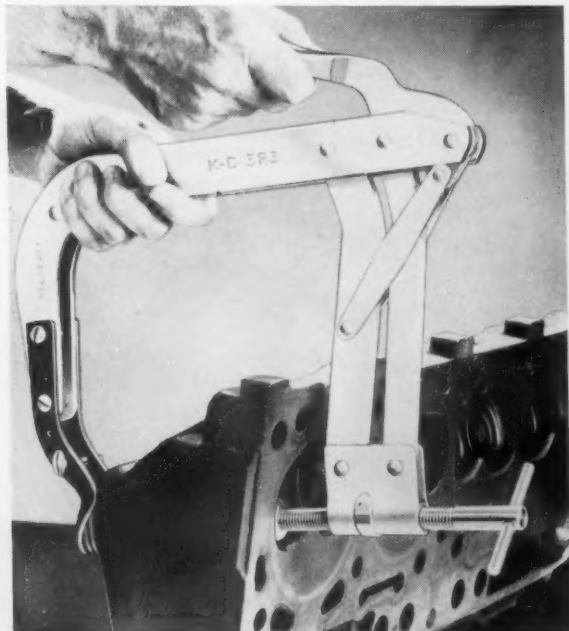
K-D Manufacturing Co.: This company has marketed a valve spring compressor for servicing V-8 valve in head engines. It is said to service most late model V-8 automobiles. According to the manufacturer, after the threaded plunger bar of the tool is set for the first spring, depth adjustment is automatic for remaining springs. The tool can also be used on L head engines if manifolds are removed, the maker states.

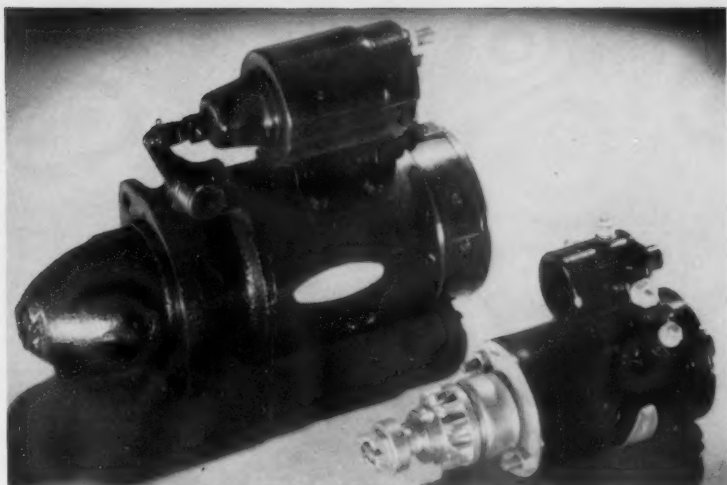
2. Car Wax

DuPont de Nemours: A wax designed for cars with finish in good condition and which is said to clean, wax and glaze in one application is the latest addition to the DuPont "7" line. This item is said to be a triple paste wax that can be wiped on and off without rubbing. Said to contain a cleaning agent as well as silicones, the product produces a lustrous glaze when it is applied, according to the manufacturer.

▼3. Air Impact Wrench

Chicago Pneumatic Tool Co.: This company has added a low cost $\frac{1}{2}$ inch square drive air model to its line of air and electric impact wrenches. The Tork-Master now provides an air operated reversible impact wrench for handling every job where $\frac{1}{2}$ inch square drive sockets would normally be used, it is claimed. The tool can be equipped with a number of accessories to ream, tap, and drive screws, it is said.





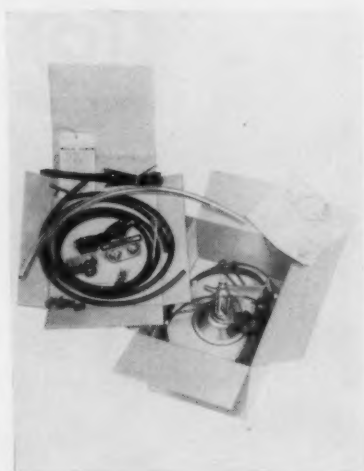
▲4. Small Engine Starter

Delco-Remy Div. of General Motors Corp.: This firm has marketed a three-inch diameter starting motor said to be designed for use on gasoline outboard engines for motorboats. The three-inch

model, now being produced for engines of up to 40 horsepower, also is available for power lawn mowers and so on, the maker states. Operated by any standard automobile battery the unit comes in 6 and 12 volt models, it is stated.

▼5. Car Lube System

Lincoln Engineering Co.: An automatic, high pressure power lubrication system in kit form has been marketed by this firm. The unit has previously been available as original equipment on two car models. Complete kits of the Multi-Luber are available for 1954, 1955 and 1956 Fords and for 1955 and 1956 Chevrolets. The manufacturer states that these packaged systems can be installed in approximately 1½ hours without need for special tools.



▼6. Brake Bleeder

Ammco Tools, Inc.: The Zip-O brake bleeder has been marketed by this manufacturer. The unit employs air pressure from a tire for brake bleeding. Said to make brake bleeding a fast, one man operation and eliminate the need for hand pumping the tool weighs approximately 3½ pounds. Loss of pressure or fluid waste is claimed to be prevented with this device. The device comes with a push-pull coupler and fittings.



7. Analyzer

E. Edelman & Company: A testing device to determine radiator leaks and faulty pressure caps in pressurized cooling systems, is now being distributed by this firm. The cooling system analyzer locates leaks or pin holes in automobile cooling systems, it is claimed. A reversible chrome plated adapter fits into long or short neck radiator openings to test the new pressure radiator caps, according to the maker.



▲8. Sealed Beams

AC Spark Plug Division of General Motors: This division is marketing the Guide T-3 headlamp. A lightweight T-3 safety aimer for use in installing the lamps is also available. The aimer is said to permit installation and aiming of the new lamps quickly and in daylight. Three glass knobs, called guide points (cast into the lens) position the head lamps when installed. Also incorporated, states the maker, are features recently standardized; more seeing distance forward and to the right.



for JANUARY

Profit Growing Ideas

Plantin' Time

9. Brake Calibrator

Johns-Manville: Cali-Brake is the name of an instrument said to speed the job of measuring inside diameters of brake drums and outside diameters of brake shoes. In addition, it can be used to show out-of-round conditions and whether drums of popular sizes are beyond safe limits for re-machining. Cali-Brake also provides a rule for measuring width, length and thickness of lining, it is stated.

11. Abrasive Wheels

Simonds Abrasive Co.: A special safety web backing of spiral wound rayon automobile tire cord is the feature of this firm's newest high speed abrasive wheels. Simex Red wheels are for use on portable disc and right angle grinders and are made in 7 and 9 inch diameters. Their field of application is for grinding welds, cleaning up ragged edges, and for all types of stainless steel, according to the manufacturer.

12. Rebuilt Engines

Rebuilders Inc.: This company has marketed the Mustang rebuilt engine for fleets, repair shops and dealers. Features of the power package are chrome alloy valves, conformatric pistons, modified camshafts, insert type connecting rods (in all Chevrolets), micro-film rod bearings, and more horse power, according to the builder. Mustang features three horsepower classifications in Ford and Chevrolet models.

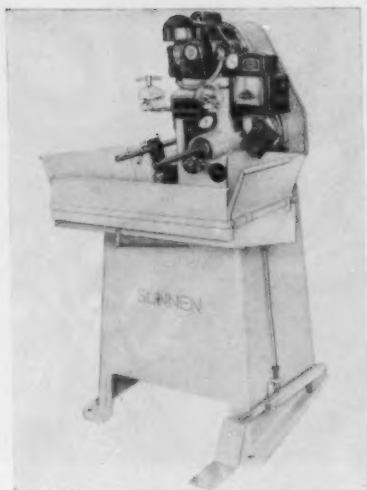


10. Wash Rack Jack

Weaver Manufacturing Co.: A wash rack jack which is said to provide a faster and more convenient method for washing car rear wheels has been marketed by this firm. It has been designed for use

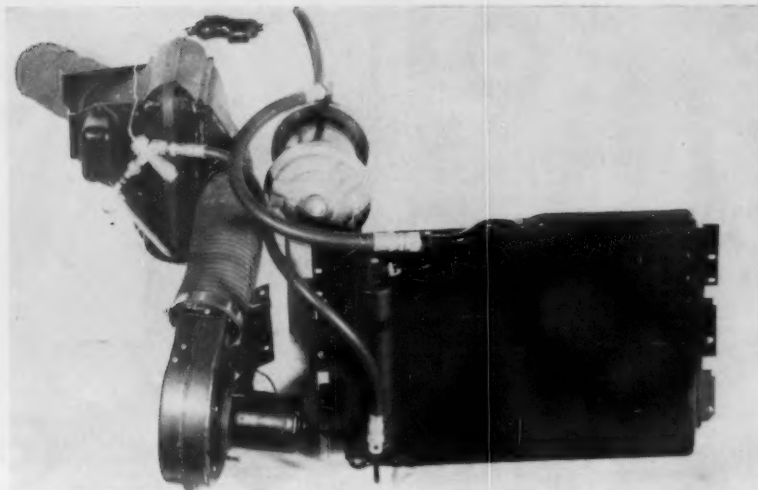
in all types of car washing establishments, according to the manufacturer. Moving the jack handle through a 180 degree arc lifts a saddle to contact the differential housing and raises rear wheels to permit rotation for hand washing.





▲13. Pin Fitting Machine

Sunnen Products Company: This manufacturer has added an improved floor model pin fitting machine to its line. The machine is said to have a diameter range of .370 inches-3.300 inches, and accuracy to within .0001 inches. Accuracy can be measured by means of the Sunnen precision clearance gage provided with the machine. The unit is said to be invaluable in sizing rods for press fit.



▲14. Air Conditioner

Harrison Radiator Div. General Motors: This firm has marketed an air conditioning system for the 1956 Buick, Oldsmobile, Pontiac and Chevrolet cars. All the systems are said to feature a Frigidaire 5 cylinder axial compressor, an all aluminum evaporator and a copper brazed serpentine tube condenser. Each system is said to be completely installed under the hood.

▼15. Fuel Filter

Carter Carburetor Corp.: This company has marketed an improved compact ceramic fuel filter to fit all popular model cars. According to the company, all gasoline is filtered through the porous ceramic before it reaches the carburetor. In addition to the filter, Carter has made available "Magnatrap," an auxiliary magnetic filter. It is said to catch and hold minute iron oxide particles.



▲16. Drying Oven

Swenson and Associates: Under concentrated far infrared radiation provided by Chromalox Electric Radiant Heaters, freshly

painted cars are said to be dried within a half hour with this company's latest drying oven. Automatic controls regulate the output of the heating elements and the



inclination of the panels of the oven walls. Each of the two oven walls has three panels and the unit will handle trucks and trailers plus cars, the maker states.



17 Chrome Oil Ring

Perfect Circle Corp.: This company's type 98 circumferentially expandable three piece chrome oil ring is currently available in 3/16 inch and 5/32 inch widths, according to the manufacturer. Used as an original equipment ring, the 98 is now specified as the oil ring in Perfect Circle 2 in 1 chrome replacement ring sets.

18 Radiator Hose Rack

Thermoid Company: Quick and accurate selection of the proper size Thermoid "Redi-Curv" radiator hose is said to be afforded by a newly designed radiator hose rack available through this firm. A new chart used in conjunction with the rack is said to contain complete application data and list



prices on all Thermoid fan belt and hose products for passenger cars and trucks.

19 Truck Washer

Choldun Manufacturing Corp.:



Designed for servicing fleet operations the Auto-Magic truck washer has been added to this company's line. Constructed of aluminum, the spray elevator is suspended on nylon cables. Features include a large water tank, separate lines and nozzles for shampoo and water spray and a double pump with 40 gallons per minute capacity, it is stated. This truck washer comes in 5 sizes from 30 to 48 feet in length, according to the company.

20 1-Piece Point Sets

Kem Manufacturing Company, Inc.: This company has marketed a line of one piece point sets which are said to be designed to prevent loose connections at the primary and condenser leads. In addition, the contact arm and

Profit Growing Ideas

for JANUARY

Plantin' Time

tungsten surfaces are claimed to be well protected and the entire unit can be dropped easily into place in the distributor. There is no need for bending or stretching the spring after installation which results in misalignment of the contact surfaces according to the manufacturer.

21 Repair Tape

Permacel Tape Corporation: A pressure sensitive tape for permanently sealing holes in metal truck bodies is now available through this company. Called Permacel 12-A body repair tape, it is weather proof and will not loosen from vibration, the maker states. It sticks on any metal, is flexible, and can be painted, it is further said. To use, it is placed over the damaged area and



smoothed out with a hard, smooth object such as a knife handle or cigarette lighter.

USE THESE

Free & Easy

INQUIRY CARDS

The Inquiry Card—How It Works

EACH month Motor Age's New Products Show Window describes dozens of fast-moving items and money and time saving equipment from the country's leading manufacturers of dependable automotive products.

When you want more free information on any of these products, simply mark a circle around the same number on the postcard as appears under the item described. You may circle as many items as you wish. Use either or both cards. Separate information will be sent to you on each item. Be sure to give your full name and address.

New Literature

22. Lift Folder

Joyce-Cridland Company: An eight page folder covering the Joyce H-Master frame contact lift is now available through this manufacturer. The folder fully describes and illustrates automobile servicing with the use of the company's newest lift. A copy of the folder may be obtained without charge through the company.

23. Automotive Catalog

Warshawsky & Co.: The 1956 catalog available through this company shows replacement parts for most vehicles, new lines of hot rod

(Continued on next page)

Postcard valid for 90 days only.

Frank P. Tighe, EDITOR MOTOR AGE
P. O. Box 76, Village Station, N. Y. 14, N. Y.

1/56

Please send me further information on the New Products, the code numbers of which I have circled below.

- | | | |
|-------------------------|-----------------------------|---|
| 1. Spring Compressor | 15. Fuel Filter | 28. Wired Tires |
| 2. New Car Wax | 16. Drying Oven | 29. Wheel Truer |
| 3. Air Impact Wrench | 17. Chrome Oil Ring | 30. Brake Bleeder Wrench |
| 4. Small Engine Starter | 18. Radiator Hose Rack | 31. Moisture-Separator |
| 5. Car Lube System | 19. Truck Washer | 32. Grease Solvent |
| 6. Brake Bleeder | 20. 1-Piece Point Sets | 33. Strippor for Plastics |
| 7. Analyzer | 21. Repair Tape | 34. Touch-Up Paints |
| 8. Sealed Beams | 22. LHT Folder | 35. Regulator Tester |
| 9. Brake Calibrator | 23. Automotive Catalog | 36. Washer Solvent |
| 10. Wash Rack Jack | 24. Chassis Parts Catalog | 37. Solder-Fix |
| 11. Abrasive Wheels | 25. Refinishing Brochure | 38. Regulator Line |
| 12. Rebuilt Engines | 26. Brake-Clutch Catalog | 39. Anti-Freeze |
| 13. Pin Fitting Machine | 27. Automotive Hose Catalog | 40. Book (page 65) "Better Foremanship" |
| 14. Air Conditioner | | |

Your Name Your Title
Your Company
Your Business: Wholesaler.....Repair Shop.....Car Dealer.....
Address (Street & No.) (City) (Zone) (State)

Postcard valid for 90 days only.

Frank P. Tighe, EDITOR MOTOR AGE
P. O. Box 76, Village Station, N. Y. 14, N. Y.

1/56

Please send me further information on the New Products, the code numbers of which I have circled below.

- | | | |
|-------------------------|-----------------------------|---|
| 1. Spring Compressor | 15. Fuel Filter | 28. Wired Tires |
| 2. New Car Wax | 16. Drying Oven | 29. Wheel Truer |
| 3. Air Impact Wrench | 17. Chrome Oil Ring | 30. Brake Bleeder Wrench |
| 4. Small Engine Starter | 18. Radiator Hose Rack | 31. Moisture-Separator |
| 5. Car Lube System | 19. Truck Washer | 32. Grease Solvent |
| 6. Brake Bleeder | 20. 1-Piece Point Sets | 33. Strippor for Plastics |
| 7. Analyzer | 21. Repair Tape | 34. Touch-Up Paints |
| 8. Sealed Beams | 22. LHT Folder | 35. Regulator Tester |
| 9. Brake Calibrator | 23. Automotive Catalog | 36. Washer Solvent |
| 10. Wash Rack Jack | 24. Chassis Parts Catalog | 37. Solder-Fix |
| 11. Abrasive Wheels | 25. Refinishing Brochure | 38. Regulator Line |
| 12. Rebuilt Engines | 26. Brake-Clutch Catalog | 39. Anti-Freeze |
| 13. Pin Fitting Machine | 27. Automotive Hose Catalog | 40. Book (page 65) "Better Foremanship" |
| 14. Air Conditioner | | |

Your Name Your Title
Your Company
Your Business: Wholesaler.....Repair Shop.....Car Dealer.....
Address (Street & No.) (City) (Zone) (State)

New Products

Continued from Page 61

and speed equipment, customizing parts and accessories and parts for older models dating back to 1920. According to the company, its newest catalog runs to 180 pages and covers over 70,000 items.

24. Chassis Parts Catalog

Hershey Products, Inc.: The G-H catalog on chassis parts available through this company is said to incorporate a revised format that permits fast convenient location of required chassis parts for any year and model car. Truck applications are included with tonnage for popular models indicated. A wall chart, also available, gives coverage and application of all popular chassis kits through 1955, according to the company.

25. Refinishing Brochure

Carborundum Company: A fully illustrated brochure covering automotive refinishing methods, step by step, is now available through this firm. Called "Autobody Refinishing Methods The Flexbac Way" the booklet is printed in full color and describes machine sanding procedures including the Carborundum 1-2 method. Additional pages are devoted to glass installation, metal cutting, adhesives and sealers.

26. Brake-Clutch Catalog

Johns-Manville: A condensed catalog on J-M brake lining and clutch facings for passenger cars and light trucks has been published by the maker. The catalog supplies alphabetical and numerical listings of specifications for most vehicles and has data on all Ford, Chevrolet, Dodge and International Trucks. Its 88 pages cover 1955 models and give recommendations for all makes and systems including power brakes.

27. Automotive Hose Catalog

Boston Woven Hose and Rubber Co.: A catalog featuring its line of hoses for all automotive applications has been published by this company. Descriptions of more than 20 types of hoses in varying sizes are contained in the book with each style of hose being illustrated in cross-section. The red and black catalog offers complete specifications and application data.

(Continued on page 128)

BUSINESS REPLY CARD

NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY

Chilton's MOTOR AGE

P. O. Box 76,

Village Station,

New York 14, N. Y.

Readers Service Dept.

FIRST CLASS
PERMIT No. 36
Sec. 349, P. L. & R.
New York, N. Y.

BUSINESS REPLY CARD

NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY

Chilton's MOTOR AGE

P. O. Box 76,

Village Station,

New York 14, N. Y.

Readers Service Dept.

FIRST CLASS
PERMIT No. 36
Sec. 349, P. L. & R.
New York, N. Y.

1955 New Passenger Car Registrations by Makes by States*

STATE AND MONTH	Buick	Cadillac	Chevrolet	Chrysler	De Soto	Dodge	Ford	Hudson	Kaiser	Lincoln	Mercury	Nash	Oldsmobile	Packard	Plymouth	Pontiac	Studebaker	Willlys	Misc. Dom.	Foreign	Total		
Alabama	Oct. 980	65	2874	121	75	363	2247	27			40	421	90	607	36	817	618	69	2	26	9,479		
10 Mos.	7397	897	22443	1297	855	2539	21207	363	1	289	3639	655	5363	394	7705	5958	853	30	3	163	82,001		
Arizona	Oct. 324	56	767	61	39	113	873	19			19	134	61	160	16	223	170	55	2	19	2,913		
10 Mos.	2857	501	8602	644	357	1153	6348	219	11	139	1336	420	1844	238	2561	1841	575	31	223	27,995			
Arkansas	Oct. 416	47	1509	55	44	187	1347	22			25	294	48	412	16	413	393	48	2	2	5,280		
10 Mos.	3264	565	11400	611	464	1527	12025	258	4	161	2258	311	3424	168	4246	3101	533	34	1	27	44,382		
California	Oct. 6447	603	8573	1075	861	2745	12022	318	2	860	4029	836	3267	402	2920	3919	755	25	239	51,998			
10 Mos.	72876	14184	198703	11157	8248	21196	107582	3636	115	3642	39746	8294	43695	3781	40074	41470	9513	436	13	15913	554,984		
Colorado	Oct. 467	43	1630	109	79	243	1032	46			35	291	105	437	58	312	377	114	2	16	5,395		
10 Mos.	4267	1080	13204	1451	830	2152	12177	470	5	323	2989	941	4140	407	4069	3749	829	22	2	228	53,335		
Connecticut	Oct. 849	96	1970	309	165	524	1831	91			49	438	235	785	151	856	656	153	3	210	9,372		
10 Mos.	8959	1845	17858	2878	1473	3904	17671	862	14	462	4137	2003	7792	944	9355	6794	1412	83	1649	90,995			
Delaware	Oct. 201	4	616	21	11	72	456	1			12	75	11	145	12	169	166	15	2	89	18,599		
10 Mos.	1960	321	4677	299	251	600	4544	15	1	102	830	125	1232	87	1883	1272	197	16	52	2,758			
Dist. of Col.	Oct. 282	42	631	49	44	112	523	8			14	95	22	270	27	308	241	38	10	183	17,240		
10 Mos.	2676	702	6806	690	599	1115	5169	118	6	125	1225	301	2671	230	3669	2650	300	10	1	1376	155,294		
Florida	Oct. 1511	242	4196	300	257	948	4725	112	1	98	1063	300	1902	146	1530	1846	398	13	9	27	10,051		
10 Mos.	14095	3652	38566	3079	1907	5110	37931	887	9	922	7920	1425	12929	969	11800	10564	1967	147	1	269	124,140		
Georgia	Oct. 953	77	2827	137	80	380	2735	13			22	44	80	59	777	59	505	793	75	23	4	1,785	
10 Mos.	10490	1604	33490	1786	1166	4362	32983	198	23	365	5985	884	8915	565	9739	10240	1678	75	1	40	20,489		
Idaho	Oct. 200	24	429	47	34	90	310	31			15	179	33	133	20	102	138	45	37	97	36,310		
10 Mos.	2216	391	4512	584	390	1013	3752	270	5	112	1166	405	1631	174	1630	1616	545	37	908	393,601			
Illinois	Oct. 4376	334	9055	678	451	1546	7089	396	44	1999	20909	6515	38377	3164	38435	27407	5050	310	53	344	22,341		
10 Mos.	46330	9155	85149	9353	6177	14724	74462	5100	44	1999	20909	6515	38377	3164	38435	27407	5050	310	53	344	22,341		
Indiana	Oct. 2770	181	5869	300	257	948	4725	112	1	98	1063	300	1902	146	1530	1846	398	13	9	27	10,051		
10 Mos.	21575	3188	42994	4214	3802	8249	41267	1257	21	727	8812	2755	15459	1422	17483	14958	5123	193	3	161	92,434		
Iowa	Oct. 840	65	2323	164	97	398	1925	48	1	35	471	110	635	63	545	522	109	5	1	1	8,465		
10 Mos.	8394	1300	23832	2043	1254	3815	21713	576	14	354	4643	1130	6917	601	7538	6382	130	3	124	84,389			
Kansas	Oct. 828	102	2343	128	84	381	1894	59	1	36	504	137	568	74	536	647	130	3	51	70,757			
10 Mos.	7599	1348	20673	1680	1103	3238	19678	643	16	324	4712	1495	8045	571	6998	7498	1142	66	5	157	85,234		
Kentucky	Oct. 706	25	1573	79	63	240	1817	31			18	364	44	494	34	380	366	54	4	51	6,305		
10 Mos.	7360	808	18511	1135	863	2706	17502	313	8	146	3948	691	5201	376	6270	4814	885	66	3	135	9,568		
Louisiana	Oct. 633	54	2474	137	77	275	2189	10			30	455	43	636	42	549	668	120	5	2	2,192		
10 Mos.	6440	1120	22104	1210	890	2630	32373	187	8	273	3683	574	6885	411	7126	6935	1353	52	1	238	26,956		
Maine	Oct. 2222	363	6781	518	499	1152	5656	305	7	119	1207	628	1472	196	3051	1965	513	57	7	88	9,568		
10 Mos.	982	88	2240	182	131	468	2033	42			48	475	95	805	91	1036	618	144	2	450	101,545		
Maryland	Oct. 9701	1490	24847	1961	1849	4261	21798	517	7	370	4582	969	7483	745	1016	171	1043	933	177	7	1660	157,890	
10 Mos.	919	103	3109	241	232	604	3112	109	19	716	8598	3883	15085	1183	16433	11369	1724	112	8	128	38,458		
Massachusetts	Oct. 15696	2530	37817	3689	2949	5978	34181	1270	19	328	1900	344	2540	233	2198	2234	277	7	11	149	109,046		
10 Mos.	4331	269	8339	570	465	1607	10589	117	29	1873	22851	4227	33252	2895	36488	31018	3305	221	11	149	9,924		
Michigan	Oct. 51320	8452	100894	7864	6162	18419	100935	1802	29	43	635	138	860	111	792	542	131	3	88	1	199	109,046	
10 Mos.	916	111	2992	137	157	431	2119	111	13	380	5337	1348	10359	959	9394	6957	1938	88	1	149	5,335		
Minnesota	Oct. 10210	1842	24982	2303	1887	4258	25900	831	13	12	189	23	354	20	476	326	596	27	27	48,933			
10 Mos.	476	48	1755	53	59	183	1295	9	7	151	2298	256	3104	223	5282	3574	1551	214	5	49	18,124		
Mississippi	Oct. 1628	158	4720	209	237	645	3947	37			89	1063	204	1479	67	1847	1551	203	91	10	306	152,732	
10 Mos.	13425	2320	36319	2507	2549	4948	35135	443	23	536	7699	1746	12357	726	16989	12550	2053	91	10	306	152,732		
Missouri	Oct. 174	39	704	47	19	145	444	24			6	114	1142	332	1766	263	1839	1659	553	28	1	76	2,453
10 Mos.	1682	428	5483	573	327	1155	4934	295	6	114	1142	332	1766	263	1839	1659	553	28	1	76	2,453		
Montana	Oct. 368	53	911	51	41	197	965	9			19	248	32	226	39	229	259	50	45	48	50,697		
10 Mos.	5921	833	11438	1112	718	2004	12824	210	5	182	2835	472	3645	345	4341	3381	740	45	1	196	10,488		
Nebraska	Oct. 73	18	137	15	18	40	110	6			6	39	5	72	14	72	792	560	4	1	30	1,645	
10 Mos.	1058	301	1770	281	216	474	1962	50	1	62	540	107	975	177	961	109	36	1	225	20,067			
Nevada	Oct. 103	11	446	25	27	77	394	37			10	76	37	81	149	1932	1593	350	30	2	275	21,257	
10 Mos.	1595	250	4983	407	317	877	4175	341	3	110	938	501	1299	121	1686	1167	218	6	1769	217,583			
New Hampshire	Oct. 2415	197	4447	510	426	1082	4929	80			159	1477	223	1743	221	1686	1167	218	6	1769	217,583		
10 Mos.	27152	5203	42272	6799	5329	9540	41133	1296	27	1076	12033	2669	18861	2243	22374	14782	2904	157	4	1	2,633		
New Jersey	Oct. 232	51	756	51	41	109	527	3			12	175	23	234	24	156	190	34	2	1	98	24,512	
10 Mos.	232	51	756	51	41	109	527	3			12	175	23	234	24	156	190	34	2	1	98	24,512	
New Mexico	Oct. 232	51	756	51	41	109	527	3			12	175	23	234	24	156	190	34	2	1	98	24,512	
10 Mos.	2681	438	9904	555	317	905	5188	64	1	169	1413	237	1956	183	1769	2131	415	33	4	750	51,128		
New York	Oct. 62051	12774	108883	16898	11166	23596	97494	3024	142	2619	26604	8114	52311	4956	56875	39321	6386	562	40	5721	539,631		
10 Mos.	1047	88	3401	218	115	435	2670	50			47	511	105	886	61	846	923	133	3	35	11,584		
North Carolina	Oct. 10234	1535	26755	2302	1716	3686	27477	495	15	394	4694	810	52311	4956	56875	39321	6386	562	40	5721	539,631		
10 Mos.	161	7	478	33	29	131	510	15			3	80	989	242	1501	164	1947	996	302	14	1	1,914	
North Dakota	Oct. 1340	255	4435	470	404	876	4401	93			3	80	989	242	1501	164	1947	996	302	14	1	1,914	
10 Mos.	3591	232	6627	509	519	1842	7784	213	1	177	1648	370	2346										

1965

EXPECTATIONS



An absorbing look into the future with

particular stress on vehicle population

and estimates of motor fuel consumption

By J. G. Jordan, Vice President — Shell Oil Company

(from notes for a talk before the Gasoline Pump Manufacturers Assn.)

SINCE all economic activity begins and ends with people, the basic element in the 1965 picture is our population. By then the U. S. population will probably be 190,000,000 persons compared to our present 165,000,000. Households, the basic purchasing unit for the larger durable goods items will number about 56 million, about 8 million more than we have now.

The rapidity of this growth is breathtaking but from a business standpoint there is the additional factor of individual wealth. The spendable income of our people in 1965 will be about \$380 billion—it is now about \$260 billion. This comes out to a 1965 income per person of \$2,000 or an income per household of \$6,700.

Demand For Propelled Vehicles

How do we translate these remarkable but admittedly abstract statistics into tangible aspects of your business and mine? Let's look at our products; my major one is gasoline and yours, the gasoline pump. Well, it's obvious that the demand for our products is derived from the demand for propelled vehicles. The most important is the automobile and with the mass ownership of automobiles, we shall have to follow the people.

We know the number of people and their wealth in 1965 but where will they be. There are

three geographical trends operating in the country today. One is the steady westward movement of our population, another is the trek from farm to city and the third is the movement out of the city proper to the urban fringes and suburbs. We know that these trends indicate a continued reliance on the automobile for getting around. We know that suburban living generates the multiple car family, consequently, we know that the largest share of the expected 4,850,000 barrels per day demand for motor fuel in 1965 will come from these suburbanites.

The housing people have a habit of accommodating suburban movements by overnight developments of corn fields and potato patches. Where one day crops grew, the next day houses exist. This means that gasoline marketers must be alert to quick changes in population locale, and must be ready to make additional investments in stations and equipment. The pump manufacturers can logically expect to share in the business thus generated.

Mobility of Consumer

The mobility of the consumer is a very real cost to gasoline marketers and, consequently, it looms large in the competitive struggle. That is why we are always looking for equipment

(Continued on page 104)

MANAGEMENT CLINIC

Supervisors and Follow-Up

Thorough and authoritative discussion by Rexford

Hersey of today's problem of effective follow-up

FOLLOW up is commonly considered the special problem of top-management in its control of the organization. This point of view is not factually correct. Follow up is even more important at the supervisory level than in the top echelon. It is through the supervisor that management policies and instruction reach the worker.

If the supervisor, therefore, is not fully acquainted with management's stand and goal he cannot interpret them and pass them on to his workers. If he does not follow up to see that his workers have comprehended his communications correctly and are acting upon them as they should, the entire plan of management may go astray.

Some machinery to determine how well the foreman is performing the follow up function must be set up. This is doubly important because the foreman can follow up or not follow up largely as he wishes. Without a method of checking the performance of this function it can be skipped and very likely nobody

will be the wiser. It is not like the interviewing function which the foreman must do willy-nilly. With interviewing, therefore, the question is how well or how poorly the foreman interviews. Usually he cannot shirk it.

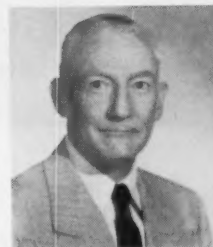
Neglect of Follow-Up

How many of you will agree with me that follow up is the most neglected or certainly the least systematically carried out of all the supervisor's functions? Why should this situation exist, if it does? Is it due to lack of realization of its importance? Or is it the result of a false attitude toward the whole problem?

Let the answers given by 98 supervisory groups in a large eastern company (these are group answers, please note, not individual answers) to the following problem give some possibilities:

KY, an employer, makes it a practice once he has asked one of his key people to do something not to question him about it thereafter. He feels that if

(Continued on page 120)



Rexford Hersey

Much of the substance of this article by Rexford Hersey, is taken from his book "Better Foremanship — Key to Profitable Management" (2nd edition revised, published by Chilton Company.

Dr. Hersey's book was written specifically to increase production, improve morale and labor relations, and stimulate new methods by improving the daily contact between supervisor and employee.

The book provides practical working tools for foremen and supervisors—tells them how to handle these tools—how they fit in their daily job.

Every technique, every method described in detail, has been tested on the job.

For more information on the book, check Item No. 40 on the New Product Inquiry Card on page 61.

TROUBLE



By Jack Montgomery
Technical Editor

- **Wants a cure for Raw Gas Odor**
- **Low Gas Mileage Complaint**
- **Vacumatic Transmission for Dodge**

Wants Answer to Problem Of Raw Gas Odor in Ford

I have a 1952 overhead valve Ford that has an obnoxious odor of raw gas that enters the car after the motor is shut off. This gas smell was apparent shortly after the car was purchased new, and was very strong even when the car was in motion. We have made the following replacements in an effort to correct the condition: Replaced the carburetor and fuel pump; tightened the gas tank unit cover; checked gas tank and lines for possible leaks; caulked all openings where fumes might possibly enter. Any suggestions that you can give us as to correcting this condition will be greatly appreciated.

E. J. Vavra
Harbor-Hill Auto Parts
Long Beach 13, Calif.

YOU certainly have done a thorough job in trying to repair

this trouble and there is very little I can add. However, I would suggest checking the float level and lowering it 1/16 inch. This will prevent the gas from spilling down the throat. Also, make sure the tail pipe extends slightly past the rear bumper.

Wants Cure for Low Gas Mileage on '50 Mercury

I have a 1950 Mercury that gives very low gasoline mileage. In fact, it averages about 10 to 11 miles per gallon under ordinary driving conditions. In addition, the engine uses a little oil. I would like to know how to correct this.

Larry E. Lafferty
Thayer, Iowa

I WOULD suggest giving this engine a major tune-up which should include setting the float level, check the ignition system, etc. I feel quite sure the trouble

may be due to the float level. Also make sure the wheel alignment is correct and the brakes are not dragging. If the engine is using an excessive amount of oil it should be overhauled, valves reground, new rings, etc. Before tearing the engine down, check the vacuum pump as it might have a leaky diaphragm, causing the oil to be drawn out of the crankcase.

Would Like Vacumatic Transmission in Dodge

Could you tell me if I can install a vacumatic transmission in a 1942 Dodge? This car is without fluid drive.

George Haggett
Steamburg, New York

YOU could install this unit, but it would be quite a job. It would be necessary to change the bell housing, flywheel and the crankshaft, along with throttle linkage and a new carburetor.

FOR ADDITIONAL SERVICE INFORMATION REFER TO CHILTON'S

SHOOTING PROBLEMS



MOTOR AGE SHOP CLINIC QUIZ

This quiz is based on the article "Quick Service on the '56 Ford" which begins on page 44 of this issue. After reading the article and the Tune-Up Specifications insert with it, read these questions carefully. The first six are multiple choice; the last four are true or false.

1. When changing an oil filter after car is on lift or on stands, front wheels should be turned as far as possible to the (left), (right).

2. When replacing the center bolt of the filter assembly, the center bolt should be tightened (15 to 20 lbs-ft of torque), (20 to 25 lbs-ft of torque).

3. In checking and setting valve lash, the engine should

be run at least (30), (20) minutes at 1200 rpm to stabilize engine temperature.

4. The crankshaft need only be turned (one), (two), (three) complete revolution(s) when adjusting all tappets.

5. In setting valve lash, the tappet clearance—with engine properly warmed up — should be (.018), (.017).

6. To check ignition timing, the timing light high tension lead should be hooked to the number one spark plug on the (left), (right) bank.

7. The damper has six timing marks. The long mark represents T.D.C. and initial timing should be set at 6 degrees B.T.D.C.

8. The timing is advanced by rotating the distributor

body counter-clockwise and is retarded by rotating it in a clockwise direction.

9. Before removing the distributor from an engine which is properly timed, a mark should be scribed on the distributor housing indicating the rotor's position and another mark on the cylinder block and distributor housing to indicate the position of the housing. Using these markings the distributor can be installed without changing the ignition timing.

10. To make sure the gasket is seated evenly when replacing the filter assembly, rotate the filter assembly slightly in each direction and then finger-tighten before applying torque with universal socket.

For answers to this quiz refer back to the article or check with quick answer chart on page 102

MOTOR AGE FLAT RATE AND SERVICE MANUAL



BODY SHOP TIPS

are worth

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

Deeper Notch in Clip Groove Secures Handle

Occasionally we have a General Motors car come into the shop with the complaint that the inside door handles will not stay on. To fix these, I saw a $\frac{1}{8}$ inch notch farther down in the clip groove. This lets the clip set in farther and prevents a recurrence of the trouble. *Charles Malm, Kizzier-Anderson Chevrolet Co., Holdrege, Nebr.*

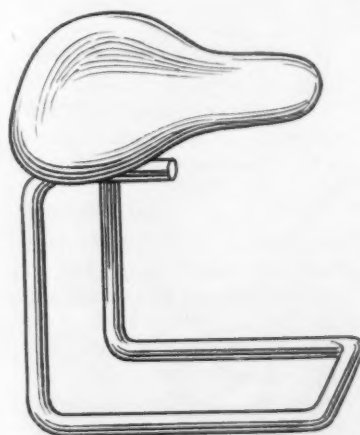
Body Jack Altered To Fit Body Channel

Here is an item I devised to aid in jacking out the body structure of automobiles. On late model cars the body bolts are sunken in a channel which is spotwelded to the floor of the car. The hole above the bolts is too small to admit a standard $1\frac{1}{4}$ inch jack pipe. To

overcome this problem I obtained a short piece of pipe that just slipped inside a $1\frac{1}{4}$ inch pipe. I then brazed it securely all around. This small pipe fits neatly through the hole and on to the body bolt. *George Armstrong, Cowichan Bay, B. C., Canada.*

Discarded Bicycle Seat Is Handy for Low Work

I have found that an old bike seat and some pipe make a handy



stool for low work. First the pipe is bent into the shape shown and then the seat is welded to it. *Ronald Davis Jerry's Body Shop, 608-10th St., Onawa, Iowa.*

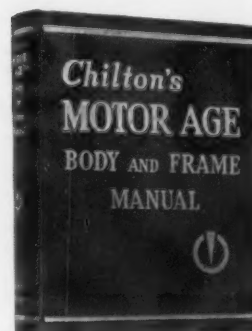
Carbon Black Protects Chrome from Hot Flame

When welding or heating small areas near chrome strips or mouldings I let the carbon black from

the torch flame cover the chrome thickly near my working area. (This is done with little or no oxygen turned on.) The carbon black gives excellent protection and a hot flame will not burn the chrome. The carbon black can be wiped off with a cloth after the work is done and prior to painting. *Nick Sichok, 774 Smith Alley, Johnstown, Pa.*

Discarded Windshields Used to Check Opening

Here is an idea to prevent breaking a new windshield when repairing the opening. I save windshields that have been damaged but are in one piece. Each one has the year, make and model painted on it. If a wrecked car comes in with the windshield opening damaged, I use the discarded windshield to measure and check the alignment of the opening. *Bill Meyer, Alta Body Shop, Alta, Iowa.*



Other valuable information of the type presented each month in The BODY SHOP is readily available in Chilton's Motor Age Body and Frame Manual.

Poor gas mileage can make any new car customer bellow like a bull



Be sure to specify

High HP Purelube

— the high-horsepower motor oil that stretches gas mileage in today's new cars

You can't blame a new car customer for bellowing like a bull if he finds his high-horsepower car is poor on gas mileage.

So make sure your customers get top mileage, specify High HP Purelube for every car you sell and service.

High HP is a superior multigrade oil with the greatest temperature range protection. Its resistance to thickening at low and warm-up temperatures increases gasoline mileage by reducing fluid friction . . . yet its resistance to thinning out at high temperatures assures maximum protection against wear and cuts oil consumption when compared to normal SAE 10W, 20W or 20 oils.

Keep your customers happy with High HP Purelube. It saves gas . . . saves oil . . . saves horsepower. And it might save you some repeat customers.

And for extra power, recommend they use PURE-PREMIUM—the High HP Gasoline, too.



Be sure with Pure

Sales offices located in more than
500 cities in Pure's marketing area.

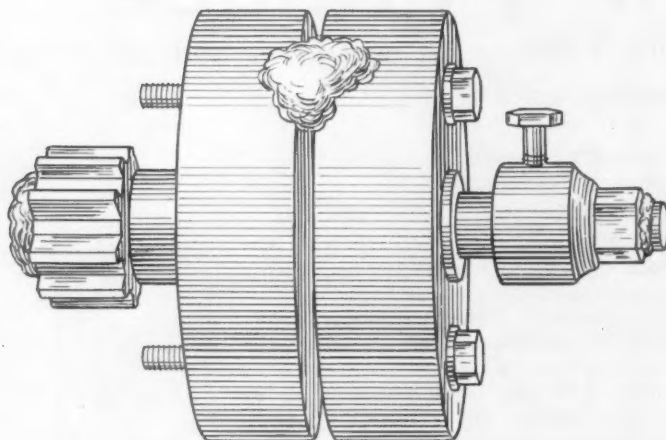
\$25 ShopKinks \$7.50

TIME AND WORK SAVING IDEAS ON CARS AND TRUCKS CAN PAY OFF. SEND YOURS IN NOW!

If you have an original idea for a special tool, a short cut on a job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age. If your Kink is used it may bring you \$7.50 or \$25. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

\$25

Discarded Parts Make Tool to Turn Engines



We've devised a tool for turning engines that have a covered flywheel and which require removal of the starter to pull the oil pan. For a Ford six or V-8, the tool consists of two Ford starter rear plates, a piece of armature shaft, a starter gear, two cut down bolts and part of a starter drive. A nut welded on the end permits the use of a ratchet wrench. A ten inch handle supplies leverage to turn the engine. *Ivo V. Pennington, Pennington's Garage, Wauneta, Neb.*

Notched Plate Speeds Tip Change on Welding Torch

When doing welding jobs we found it difficult to change tips on the acetylene torch without loosening the adapter at the same time. To overcome this, we welded a notched plate to the welding cart. Dropped into the notch, the hex section of the adapter is firmly held while the torch tip is turned with a wrench. To remove the entire tip assembly no wrench is needed, as the hex nut is simply dropped into the notch and the torch body twisted. *Stanley Clark Service, Box 222, East Bradenton, Florida.*

Length of Armature Used as Bushing Punch

I have devised a tool for removing and installing starter rear bushings. The tool is a four inch length cut from a discarded Chevrolet starter arm. This can be used to drive the old starter bushing out and the new one into place. In addition, the tool can be used for work on other bearings of similar size. *C. F. Lindquist, Bernier Motor Co., Rosemount, Minn.*

Finds Several Uses For Discarded Choke Controls

Here are a few of my uses
(Continued on page 72)

FINEST



*Perfect Circle 2-in-1 chrome set
with the New type "98" chrome oil ring**

• In Perfect Circle's 2-in-1 Chrome set, the top compression ring is specially designed to perform where pressures are greatest, heat is highest, lubrication poorest.

• The new Type "98" oil ring with self-expanding spacer assures uniform seal against the cylinder wall. In addition to this important

feature, it provides a positive side sealing action on the ring groove.

• BOTH rings are plated with thick, solid chrome that resists wear, more than doubles the life of cylinders, pistons and rings. Car owners get thousands of *extra* miles of positive oil control and sustained power.

PERFECT CIRCLE piston rings

The brand most people prefer

*U. S. Patents 2,635,022 and 2,695,825

Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Toronto,

Shop Kinks Continued from Page 70

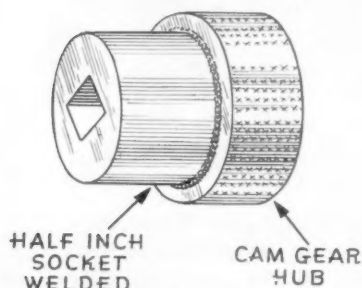
for old choke controls, which are mighty handy tools. By cutting the wire to different lengths and bending the end, they can be used on many jobs. Included are: pulling hydraulic valve lifters, installing generator and starter brushes, rebuilding master cylinders and so on. *Lewis Champlain, Stillman Standard Service, Stillman Valley, Illinois.*

Blanket Speeds Snow Removal on Car Lots

We've developed a fast method to remove the snow from used cars on the lot. First we roll up an ordinary bed blanket. Then, with a man holding each end, the blanket is dragged along the roof of each car from front to rear. The same procedure is followed from the windshield to the front of the car. *Joe Gancas, Bob Coughenour, Inc., 890 Park Ave., Meadville, Pa.*

Simple Tool Devised To Rotate Cam Shaft

We have found it difficult to turn a cam shaft after the old gear has been removed. We make this job easier by first getting an old timing gear and cutting off the fibre to steel hub. The new gear is then



aligned with the old key way and a timing mark is punched to align with the crank shaft gear marks. Next, a discarded 1/2 inch drive socket is welded to the steel hub. After this, the tool is turned with a ratchet until the marks align. The steel hub is removed and the

new gear is driven into place. *Ralph B. Greene, Greene's Repair Shop, Centreville, Alabama.*

Walled Tubing Speeds Wheel and Drum Jobs

The method I use to remove and install front wheels, or the entire drum and wheel assembly, saves time and effort. This is especially true where I only want to slide the wheel assembly out for lining inspection. A 20 inch length of 1/16 inch walled steel tubing having a 1 inch inside diameter is handy in all operations. To install a wheel, I insert the tubing through the wheel hub and slide the tubing partly onto the spindle. Using the tubing as a lever, the wheel is lifted into position easily and with no damage to the grease seal. *Edward Wisniewski, West Lawn Motor Co., Inc., 1914 Penn Ave., West Lawn, Penna.*

Homemade Hone Fits Odd Sized Wheel Cylinders

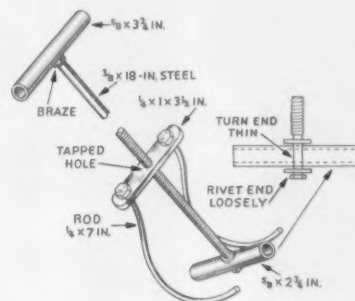
Several times I have had the job of reconditioning odd sized master and wheel cylinders for which we have no hones to fit. To do these jobs I first get a length of 1/4 inch welding rod and split about an inch of it with a hacksaw. Then, I wrap a fine grade of 1 inch emery tape around the rod until it is about the correct size. Used in an electric drill, this homemade hone does a nice job. *Orvin G. Camp, Box 367, Buffalo, Oklahoma.*

Useful Trick to Secure Defroster Control Cable

Recently a 1954 Buick came into the shop with defroster control cable trouble. The wire cable that is attached to the control arm shaft had been slipping off. To stop this, I drilled a No. 60 hole in the arm shaft, slipped the wire on and put a cotter pin in the hole. *Charles V. Myers, 256 Chestnut, Lakewood, New Jersey.*

Mechanical Hand Helps Replace Radiator Hose

Like a mechanical hand, this tool bends and collapses a replacement radiator hose and positions it between the lower radiator connections. Unscrewing the handle



straightens the hose and it is then nudged over the fittings by hand. *Stanley Clark, Box 222, East Bradenton, Florida.*

Method to Remove Rust From Windshield Washer

The windshield washer on late model cars will sometimes fail to operate because of rust. The rust accumulates in the elbow found on the vacuum side of the pump unit. Due to the construction of the washer, it is impossible to remove this elbow for cleaning. To do the job, I drill a small hole on the curve of the elbow and ream the inside out with a drill. When cleaned, the hole is soldered closed. *John B. Lunbeck, Amsterdam Battery Co., 216 W. 76th St., New York, N. Y.*

Rocker Arms Make Good Grips for Head Removal

I have found that removal and replacement of 1955-56 Chevrolet V-8 cylinder heads is sometimes difficult because there is no place to get a hand hold. I've discovered that the first and last rocker arms make good substitutes for grips. To use them for this purpose the arms and balls are placed sideways on their studs. *Jim Decker, Clatfelter Chevrolet, West Union, Illinois.*



Keith Alderson (above) is Traffic Co-ordinator for Sportsvision, Inc., in Hollywood. He says,

"I'm the Sunday morning quarterback!"

"When the final gun sounds on Saturday's football games," says Keith Alderson of Sportsvision films, "cameramen rush their film to us.

"By Sunday morning, we've got finished prints of Pacific Coast Conference games into the hands of the coaches. They call me their 'Sunday morning quarterback'!

"But that's the easy part of the job.

"By evening, we've edited all the games into three half-

hour TV shows—Big Ten, PCC games, and the All American Game Of The Week. Out they go to 150 television stations for immediate showing.

"How do we do it? Air Express, across the board!

"Nobody else can meet our schedules. Yet Air Express saves us money! Austin, Texas, to Hollywood, for instance, costs \$8.03 for 15 lbs. That's \$1.68 less than the next lowest priced air service."



Air Express



GETS THERE FIRST via U.S. Scheduled Airlines

CALL AIR EXPRESS . . . division of RAILWAY EXPRESS AGENCY

Current Passenger Car Price, Weight and Body Table

Following are prices at factory for cars with standard equipment as of December 27, 1955.
State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Delivered Price at Factory including Federal Taxes	Shipping Weight
BUICK					CHRYSLER—Cont'd					FORD—Cont'd					PACKARD				
Special 40					New Yorker					Fairlane V8					Clipper				
Sedan, 2d	2111	202	2313	3750	Sedan, 4d	3402	271	3673	4110	Tudor Sedan	1922		3250		Sedan, Del., 4d	2505	226	2731	3955
Sedan, 4d	2166	206	2372	3790	Newport, 2d	3562	283	3845	4175	Fordor Sedan	1964		3290		Sedan, Sup. 4d	2631	235	2866	4010
Riviera, 4d	2204	209	2413	3775	St. Regis	3603	286	3889	4175	Victoria, 2d	2058		3345		Hardtop, Sup.	2677	239	2916	4035
Conv. Cpe.	2467	229	2696	3880	Newport, 4d	3702	293	3995		Crown Victoria	2193		3360		Sedan, Cus. 4d	2820	249	3069	4070
Est. Wagon	2500	231	2731	3945	Conv. Coupe	3533	303	4136	4360	Sunliner	2212		3455		Constellation	2908	258	3164	4070
					Twn. & Cty.	4094	323	4417	4460	Crn. Vict. Trns.	2257		3370		Patrician	3826	334	4160	4256
Century 60					Imperial					Sta. Wgn. V8					Packard 400	3855	335	4190	4290
Riviera, 2d	2660	258	2918	3890	Sedan, 4d	4381	344	4725	4565	Ranch	2049		3473		Caribbean	5089	426	5495	
Riviera, 4d	2717	263	2980	4000	Southampt. 2d	4625	362	4987	4530	Cust. Ranch	2109		3488		Carib. Conv.	5534	461	5995	
Est. Wagon	2932	279	3211	4080	Southampt. 4d	4747	372	5119	4580	Ctry. Sed., 6p	2153		3563						
Conv. Cpe.	2929	282	3211	4045						Ctry. Sed., 8p	2276		3628						
					Crown Imp.					Parklane	2276		3628						
Super 50					Sedan, 4d	6945	521	7466	5145	Ctry. Squire	2373		3638		PLYMOUTH				
Riviera, 2d	2884	275	3159	4140	Limousine	7070	530	7600	5205					Plaza 6					
Sedan, 4d	2927	278	3205	4200						HUDSON				Bus. Coupe	1594	132	1728	3030	
Riviera, 4d	3010	285	3295	4265	DE SOTO					Wasp				Club Sedan	1686	139	1825	3100	
Conv. Cpe.	3200	299	3499	4340	Firedome					Super Sed., 4d	2179		3364	Sedan 4d	1726	142	1868	3145	
					Seville, 2d	2393	194	2587	3855	Hornet-6				Savoy 6					
Roadmaster 70					Seville, 4d	2537	205	2742	3940	Super Sed., 4d	2504		3545	Club Sedan	1778	146	1924	3125	
Sedan, 4d	3148	310	3458	4280	Sportsman, 2d	2557	207	2764	3810	Cust. Sed., 4d	2737		3636	Sedan, 4d	1818	140	1967	3160	
Riviera, 2d	3230	316	3546	4235	Sportsman, 4d	2649	214	2863	3920	Cust. H. T., 2d	2846		3695	Sport Cpe.	1915	156	2071	3155	
Riviera, 4d	3324	323	3647	4355	Conv. Cpe.	2768	223	2991	4090	Hornet-V8				Belvedere 6					
Conv. Cpe.	3335	324	3659	4395	Sta. Wagon	3037	243	3280	4230	Cust. Sed., 4d	2986		3245	Club Sedan	1856	152	2008	3125	
					Fireflite					Cust. H. T., 2d	3119		3388	Sedan, 4d	1896	155	2051	3170	
CADILLAC					Sedan, 4d	2803	226	3029	4005	LINCOLN				Spt. Coupe	1993	162	2155	3165	
Series 62					Sportsman, 2d	3014	242	3256	4030	Sport Coupe	3735		4289	Custom, 2d	2043	166	2209	3355	
Coupe	3569	313	3882	4358	Sportsman, 4d	3093	248	3341	4015	Sedan, 4d	3821		4289	Custom, 4d	2086	169	2255	3375	
Sedan	3638	319	3957	4370	Conv. Cpe	3198	256	3454	4125	Convertible	4318		4362	Sport, 4d	2244	181	2425	3420	
Coupe de Ville	3964	341	4305	4427	DODGE					Premiere				Plaza 8					
Convertible	4097	351	4448	4627	Coronet, 6					Coupe	4183		4362	Bus. Coupe	1690	139	1829	3170	
Eldorado	5814	472	6286	4809	Club Sedan, 2d	1961	160	2121	3250	Sedan, 4d	4183		4362	Club Sedan	1782	146	1928	3250	
					Sedan, 4d	2029	165	2194	3295	Convertible	4318		4362	Sedan, 4d	1822	149	1971	3275	
Series 60					Coronet, V8					MERCURY				Savoy 8					
Sedan	4342	396	4738	4540	Club Sedan	2061	167	2228	3380	Custom				Club Sedan	1874	153	2027	3255	
Series 75					Sedan, 4d	2129	172	2301	3435	Med. Sed., 2d	2012		3430	Sedan, 4d	1914	156	2070	3295	
Fltwd. Sedan	5695	492	6187	5015	Lancer	2187	177	2364	3430	Sedan, 2d	2102		3505	Spt. Coupe	2011	163	2174	3275	
Fltwd. Imper.	5895	507	6402		Lancer, 4d	2293	185	2478	3600	Sedan, 4d	2157		3520	Belvedere 8					
CHEVROLET					Convertible	2410	194	2604	3600	Coupe, 2d	2227		3560	Club Sedan	1952	159	2111	3285	
One-Fifty, 6 cyl.					Royal V8					Sta. Wagon, 8p	2447		3790	Sedan, 4d	1992	162	2154	3325	
Util. Sedan	1550	150	1700	3120	Sedan, 4d	2257	182	2439	3475	Sta. Wagon, 6p	2537		3860	Spt. Coupe	2089	166	2258	3320	
Sedan, 2d	1635	157	1792	3155	Lancer	2322	187	2509	3505	Monterey				Spt. Sedan	2122	174	2326	3415	
Sedan, 4d	1675	160	1835	3195	Lancer, 4d	2428	195	2623		Sedan, 4d	2292		3570	Conv. Coupe	2238	181	2419	3435	
Sta. Wagon, 2d	1955	182	2137	3335	Convertible					Coupe, 2d	2362		3590	Suburban 8					
Two-Ten, 6 cyl.					Cust. Royal					Sport Sed., 4d	2382		3550	De Luxe, 2d	2073	168	2241	3460	
Sedan, 2d	1715	163	1878	3185	Lancer	2359	190	2549	3520	Sta. Wagon, 8p	2684		3885	Custom, 2d	2139	173	2312	3500	
Sedan, 4d	1755	166	1921	3220	Convertible	2626	210	2836	3630	Montclair				Custom, 4d	2182	176	2358	3585	
Delray Cpe.	1770	167	1937	3185	Sta. Wagons					Coupe, 2d	2467		3620	Sport, 4d	2340	188	2528	3605	
Sport Cpe.	1855	174	2029	3225	Suburban, 6 cyl.	2237	180	2417	3455	Coupe, 2d	2507		3610	PONTIAC					
Sport Sed., 4d	1905	178	2083	3285	Suburban, 8 cyl.	2337	188	2525	3605	Sport Sed., 4d	2507		3725	Chieftain 660					
Sta. Wagon, 2d	1985	186	2171	3355	Sierra, 6 p.	2446	196	2642	3725	Convertible	2612			Sedan, 2d	2006	195	2201	3436	
Sta. Wagon, 4d	2040	189	2229	3405	Cust. Suburb.	2457	197	2654		NASH				Sedan, 4d	2080	199	2259	3496	
Sta. Wagon, 4d, 9p	2120	194	2314	3450	Sierra, 8 p.	2544	204	2748		Metropolitan*				Catal. Cpe.	2127	204	2331	3496	
Bel Air, 6 cyl.					Cust. Sier., 8p	2587	207	2794	3710	Hardtop			1445	1625	Catal. Sedan	2195	209	2404	3561
Sedan, 2d	1820	171	1991	3195	FORD					Convertible			1469	1785	Sta. Wagon, 2d	2311	218	2529	3596
Sedan, 4d	1860	174	2034	3235	Mainline 6					Rambler-6					Sta. Wagon, 4d	2399	224	2613	3691
Sport Cpe.	1960	182	2142	3225	Bus. Tudor					DeL. Sed., 4d	1642		1795	2891	Chieftain 870				
Sport Sed., 4d	2010	186	2196	3290	Tudor Sedan	1562		3087		Super Sed., 4d	1743		1905	2906	Sedan, 4d	2167	207	2374	3496
Convertible	2115	195	2310	3350	Fordor Sedan	1657		3032		Cust. Sed., 4d	1854		2025	2929	Catal. Cpe.	2229	212	2441	3496
Sta. Wagon, 4d	2245	203	2448	3475	Fordor Sedan	1699		3127		Cust. Hd. Top	2008		2190	2990	Catal. Sedan	2279	216	2495	3561
Sta. Wagon, 2d	2360	214	2574	3425	Customline 6					Cus. Sta. Wgn.	2106		2295	3110	Sta. Wagon, 4d	2478	231	2709	3641
One-Fifty, 8 cyl.					Fordor Sedan	1743		3107		Statesman 6					Star Chief 8				
Util. Sedan	1642	157	1799	3095	Tudor Sedan	1785		3147		Super Sed., 4d	2146		2345	3199	Sedan, 4d	2273	215	2488	3561
Sedan, 2d	1727	164	1891	3130	Fairlane 6					Ambass. 6	2425		2644	3555	Cust. Cat. Cpe.	2401	225	2626	3551
Sedan, 4d	1767	167	1934	3170	Tudor Sedan	1829		3107		Super Sed., 4d	2716		2956	3748	Cust. Cat. Sed.	2466	230	2696	3631
Sta. Wagon, 2d	2047	189	2236	3310	Fordor Sedan	1871		3147		Cust. Hd. Top	3072		3338	3654	Conv. Coupe	2579	239	2818	3781
Two-Ten, 8 cyl.					Victoria, 2d	1965		3202		OLDSMOBILE					Cust. Sta. Wgn.	2831	256	3089	3626
Sedan, 2d	1807	170	1977	3160	Crown Victoria	2099		3217		Sedan, 2d	2166		3691		STUDEBAKER				
Sedan, 4d	1847	173	2020	3195	Sunliner	2119		3312		Sedan, 4d	2226		3748		Champion				
Delray Cpe.	1862	174	2036	3160	Crn. Vict. Trns.	2164		3227		Holiday Cpe.	2330		3741		Sedanet, 2d	1678		1841	2780
Sport Cpe.	1947	181	2128	3200						Holiday Sed.	2397		3797		Sedan, 4d	1819		1993	2835
Sport Sedan	1997	185	2182	3260	Sta. Wgn. 6					Super 88					Commander				
Sta. Wagon, 2d	2087	193	2280	3330	Ranch Wagon	1956		3330		Sedan, 2d	2166		3691		Sedanet, 2d	1792		1970	3085
Sta. Wagon, 4d	2132	198	2328	3380	Cust. Ranch	2016		3345		Sedan, 4d	2226		3748		Sedan, 2d	1886		2072	3110
Sta. Wagon, 9p	2212	201	2413	3425	Ctry. Sed., 6p	2183		3485		Holiday Cpe.	2330		3741		Sedan, 4d	1931		2121	3140
Bel Air, 8 cyl.					Parklane	2183		3360		Super 88					President				
Sedan, 2d	1912	178	2090	3170	Ctry. Squire	2280		3495		Sedan, 2d	2301		3691		Sedan, 4d	2033		2231	3210
Sedan, 4d	1952	181	2133	3210						Sedan, 4d	2363		3768		Classic, 4d	2268	</		

A NEW

TWIST IN OIL PAN GASKETS!

thousands are making more money with

Resilient, yet extra tough

Yes, already tens of thousands of mechanics have discovered FELCOID—the last word in oil pan gaskets! So tough, you can twist it, bend it or fold it without affecting its sealing power. No gasket like it to make engine work easier and more profitable! Here are some of the reasons for Felcoid's popularity: Comes off the pan in one piece—no scraping; always a perfect fit—shrink-resistant; stays in place during installation—will not distort pan at bolt holes when normal torque is applied.

Next time you drop an oil pan, put it back with a better oil pan gasket—ask your Jobber for FELCOID by name! Felt Products Mfg. Co., 1521 Carroll Ave., Chicago 7, Ill.

easier
engine
work

will not distort pan

FEL-PRO

felcoid gasket

another good reason why...

on almost every car, there's a Fel-Pro Gasket doing a vital sealing job.

1956 Tune-up Specifications

MAKE AND MODEL		No. of Cylinders Bore and Stroke (In.)	ENGINE			Compression Ratio	Spark Plug Make and Size (mm.)	TUNE-UP DATA									
			Taxable H. P.	Piston Displacement (Cu. In.)	Maximum Brake H. P. at Specified R. P. M.			VALVES				IGNITION					
								Seat Angle	Operating Tappet Clearance		Timing	Breaker Point Gap (In.)	Cam Angle (Deg.)	Spark Plug Gap (In.)	Timing Spark Occurs T. C.		
									Inlet (Deg.)	Exhaust (Deg.)						Inlet (In.)	Exhaust (In.)	Inlet Tappet Clearance (In.)	Exhaust Tappet Clearance (In.)	Deg. Inlet Opens Before or After T. C.
AMERICAN MOTORS CORP.																	
Hudson	6-35640	6-3x4½	21.60	202.0	120-4000	7.50	CH 14	45	46	.010H	.015C	.010	26½B	.019	39	.032	TC
	6-35660	6-3½x4½	34.88	306.0	165-3800	7.50	CH 14	45	45	Hyd	Hyd	Hyd	33½B	.019	39	.030	TC
	6-35680	8-4x3½	51.20	352.0	220-4600	9.55	CH 14	29	44½	Hyd	Hyd	Hyd	14B	.016	31	.036	5B
Metropolitan	*4-541, 542	4-2½x3½	10.83	73.2	42-4500	7.20	CH 14	45	45	.015C	.015C	.015	5B	.015	30	.024	11B
Nash	6-5640	6-3½x4½	23.44	195.6	130-4500	7.47	AL 14	45	45	.012H	.016H	.015	12½B	.016	32	.030	TC
	6-5660	6-3½x4½	29.40	252.6	135-3700	7.60	AL 14	30	45	.012H	.016H	.023	12½B	.019	39	.030	4A
	6-5680	8-4x3½	51.20	352.0	220-4600	9.55	CH 14	29	44½	Hyd	Hyd	Hyd	14B	.016	31	.036	5B
Rambler	6-5610	6-3½x4½	23.44	195.6	120-4200	7.47	AL 14	45	45	.012H	.016H	.015	12½B	.016	32	.030	TC
CHRYSLER CORP.																	
Chrysler	8-C71	8-3½x3½	46.50	331.0	225-4400	8.50	AL-14	45	45	Hyd	Hyd	VTS	5B	.017	31	.035	2B
	8-C72	8-3½x3½	49.70	354.0	280-4600	9.00	AL-14	45	45	Hyd	Hyd	VTS	15B	.017	31	.035	4B
	8-C72-300	8-3½x3½	49.70	354.0	.....	9.00	AL-14	45	45	.015	.024	VTS	35B	.017	31	.035	.....
De Soto	8-S23	8-3½x3½	44.30	330.0	230-4400	8.50	AL-14	45	45	Hyd	Hyd	VTS	4A	.017	31	.035	8B
	8-S24	8-3½x3½	44.30	330.0	255-4400	8.50	AL-14	45	45	Hyd	Hyd	VTS	15B	.017	31	.035	4B
Dodge	8-D62	6-3½x4½	25.40	230.0	131-3800	7.60	AL-14	45	45	.010H	.010H	.014	12B	.020	39	.035	2B
	8-D63-1	8-3½x3½	42.20	270.0	189-4400	8.00	AL-14	45	45	Hyd	Hyd	VTS	14B	.017	31	.035	4B
	8-D63-2	8-3½x3½	42.20	315.0	218-4400	8.00	AL-14	45	45	Hyd	Hyd	VTS	11B	.017	31	.035	6B
	8-D63-3	8-3½x3½	42.20	315.0	230-4400	8.00	AL-14	45	45	Hyd	Hyd	VTS	11B	.017	31	.035	6B
Imperial	8-C70, C73	8-3½x3½	49.70	354.0	280-4600	9.00	AL-14	45	45	Hyd	Hyd	VTS	15B	.017	.....	.035	4B
Plymouth	8-P28	6-3½x4½	25.40	230.0	.....	7.60	AL-14	45	45	.010H	.010H	.014	12B	.020	31	.035	2B
	8-P29	8-3½x3½	42.50	270.0	.....	8.00	AL-14	45	45	Hyd	Hyd	VTS	14B	.017	31	.035	4B
	8-P29	8-3½x3½	45.00	277.0	.....	8.00	AL-14	45	45	.012H	.020H	VTS	14B	.017	31	.035	4B
FORD MOTOR CO.																	
Continental	8-60A	8-4x3½	51.20	368.0	.....	9.00	CH-18	45½	45½	Hyd	Hyd	.....	18B	.015	27	.034	5B
Ford	8	6-3½x3½	31.54	223.0	137-4200	8.00	CH-18	45½	45½	.019H	.019H	.019H	24B	.025	37	.034	(a)
	8-Mainline, Customline	8-3½x3½	42.05	272.0	173-4400	8.00	CH-18	45½	45½	.019H	.019H	.019H	12B	.015	27	.034	(b)
	8-Fairlane	8-3½x3½	45.00	292.0	200-4600	8.00	CH-18	45½	45½	.019H	.019H	.019H	12B	.015	27	.034	(b)
	8-Thunderbird	8-3½x3½	45.00	292.0	202-4600	8.40	CH-18	45½	45½	.019H	.019H	.019H	12B	.015	27	.034	3B
	8-Thunderbird	8-3½x3½	46.21	312.0	215-4600†	8.40*	CH-18	45½	45½	.019H	.019H	.019H	12B	.015	27	.034	(c)
Lincoln	8-73A, 73B	8-4x3½	51.20	368.0	285-4600	9.00	CH-18	45½	45½	Hyd	Hyd	NA	18B	.015	27	.034	5B
Mercury	8	8-3½x3½	46.21	312.0	210-4600	8.00	CH-18	45½	45½	.019H	.019H	.019H	12B	.015	27	.034	(b)
GENERAL MOTORS CORP.																	
Buick	8-40	8-4x3½	51.20	322.0	220-4400*	7.60*	AC-14	45	45	Hyd	Hyd	.004	25B*	.015	21	.033	5B
	8-50, 60, 70	8-4x3½	51.20	322.0	255-4400	9.50	AC-14	45	45	Hyd	Hyd	.004	30B	.015	21	.033	5B
Cadillac	8-60, 62, 75	8-4x3½	51.20	385.0	285-4600**	9.75	AC-14	44	44	Hyd	Hyd	.....	39B	.016	31	.035	5B
Chevrolet	8-1500, 2100, 2400	6-3½x3½	30.40	235.5	140-4200	8.00	AC-14	31	46	Hyd	Hyd	Hyd	10½B	.019	30	.036	TC
	8-1500, 2100, 2400	8-3½x3½	45.00	285.0	162-4400†	8.00	AC-14	46	46	Hyd	Hyd	Hyd	18B**	.019	30	.036	4B
	*8-2934	6-3½x3½	30.40	235.5	155-4200	8.00	AC-14	31	46	.006H	.013H	.....	19½B	.016	30	.036	TC
	*8-2934	8-3½x3½	45.00	285.0	195-5000	8.00	AC-14	46	46	.008H	.018H	.....	21½B	.019	30	.036	4B
Oldsmobile	8-88	8-3½x3½	48.00	324.3	230-4400	9.25	AC-14	45	45	Hyd	Hyd	N	11½B	.016	30	.030	5B
	8-Super 88, 98	8-3½x3½	48.00	324.3	240-4400	9.25	AC-14	45	45	Hyd	Hyd	N	11½B	.016	30	.030	5B
Pontiac	8-5627	8-3½x3½	49.60	316.6	205-4600*	8.90	AC-14	30	45	Hyd	Hyd	ER	22B**	.016	30	.036	5B
	8-5628	8-3½x3½	49.60	316.6	227-4800*	8.90	AC-14	30	45	Hyd	Hyd	ER	22B**	.016	30	.036	5B
STUDEBAKER-PACKARD CORP.																	
Packard	8-5640	8-4x3½	51.20	352.0	240-.....	9.50	CH-14	29	44½	Hyd	Hyd	.....	14B	.016	27	.035	5B
	8-5660	8-4x3½	51.20	352.0	275-.....	9.50	CH-14	29	44½	Hyd	Hyd	.....	14B	.016	27	.035	5B
	8-5680	8-4½x3½	54.45	374.0	290-.....	10.00	CH-14	29	44½	Hyd	Hyd	.....	14B	.016	30	.035	10B
	8-5688	8-4½x3½	54.45	374.0	310-.....	10.00	CH-14	29	44½	Hyd	Hyd	.....	14B	.016	30	.035	10B
Studebaker	8-56G	6-3x4½	21.60	185.6	101-4000	7.60	CH 14	45	45	.016C	.016C	.020	15B	.020	39	.031	2B
	8-56B	8-3½x3½	40.60	259.2	173-4500	7.80	CH 14	45	45	.024H	.024H	.030	11B	.016	31	.036	4B
	8-56H	8-3½x3½	40.60	289.0	195-4500	7.80	CH 14	45	45	.024H	.024H	.030	11B	.016	31	.036	4B
	8-56J	8-4x3½	51.20	352.0	275-4600	9.50	CH 14	29	44½	Hyd	Hyd	Hyd	14B	.015	31	.036	5B

ABBREVIATIONS

*—1955 production models.
†—With overdrive only; 225-4600 with Fordomatic.
▲—With overdrive only; 9.00 with Fordomatic.
●—With automatic transmission.
■—8.90 with Dynaflo.

▼—30B with Dynaflo.
**—Eldorado, 305-4700.
††—170-4400 with Powerglide.
▲▲—26 $\frac{1}{2}$ B with Powerglide.
●●—27B with Hydromatic.
(a)—4B with standard and overdrive transmission; 6B with Fordomatic.
(b)—3B with standard and overdrive transmission; 6B with Fordomatic.

(c)—3B with overdrive; 6B with Fordomatic.
A—After.
AC—A.C. Spark Plug Div.
AL—Electric Auto-Lite Co.
B—Before.
C—Cold.
CH—Champion Spark Plug Co.
ER—End of ramps used for valve timing.

H—Hot.
Hyd—Hydraulic valve lifters, zero clearance.
N—No or none.
NA—Not available.
NU—Not used.
TC—Top center.
VTS—Valve train solid.



"From the days of the 'horseless carriage',
the automotive industry has been continuously on the
move. It has never stood still, never 'parked' at any time."

19 OF THE 20 MAKES OF PASSENGER CARS USE ESSENTIAL
PARTS ENGINEERED AND PRODUCED BY

BORG-WARNER



THESE UNITS FORM BORG-WARNER, Executive Offices, 310 S. Michigan Ave., Chicago. DIVISIONS:
ATKINS SAW • BORG & BECK • CALUMET STEEL • DETROIT GEAR • FRANKLIN STEEL • HYDRALINE PRODUCTS • INGERSOLL
CONDITIONED AIR • INGERSOLL KALAMAZOO • INGERSOLL PRODUCTS • INGERSOLL STEEL • LONG MANUFACTURING • MARBON
CHEMICAL • MARVEL-SCHLEBLER PRODUCTS • MECHANICS UNIVERSAL JOINT • MORGE • PESCO PRODUCTS • ROCKFORD CLUTCH
SPRING DIVISION • WARNER AUTOMOTIVE PARTS • WARNER GEAR • WOOSTER DIVISION • SUBSIDIARIES: BORG-WARNER
ACCEPTANCE CORP. • BORG-WARNER INTERNATIONAL • BORG-WARNER, LTD. • BORG-WARNER SERVICE PARTS • LONG MFG.
LTD. • MORSE CHAIN • MORSE CHAIN OF CANADA, LTD. • REFLECTAL CORP. • WARNER GEAR, LTD. • WAUSAU MFG. CO.
WESTON HYDRAULICS, LTD.



"no parking any time"

In a very real sense, this well known traffic sign admirably sums up the history of the automotive industry. From the first struggling days of the "horseless carriage", the industry has been continuously on the move. It has never stood still, never "parked" at any time.

Today the automotive industry is truly the pace setter of American business. Its vitality has never been more evident, its engineering, styling and performance achievements never so exciting, its future never so promising.

Borg-Warner is proud of its long, close and continuing association with the automotive industry . . . proud of its engineering and production contributions to automotive performance, economy and safety. The partial list shown here reads almost like a history of the development of the automobile. Each is an example of Borg-Warner's guiding principle, "Design it better—make it better." And each is a promise of future achievement.

So long as the industry looks ahead, thinks ahead and moves ahead, there will continue to be "no parking at any time."

Roy C. Ingersoll

P R E S I D E N T
BORG-WARNER CORPORATION

MILESTONES ALONG THE WAY

1900—The old time mixing valve was replaced by SCHEBLER carburetors.

1903—Radiators made of copper tubing with attached cooling fins introduced by LONG.

1913—The single plate clutch was developed by BORG & BECK, and silent timing chains were introduced by MORSE CHAIN.

1916—Universal joints were developed by MECHANICS.

1921—First standard type transmissions were introduced by WARNER GEAR.

1922—Double plate clutches were introduced by LONG.

1923—Multiple spring clutches were developed by ROCKFORD.

1924—Vibration dampening flexible center clutches introduced by BORG & BECK.

1930—Transmission synchronizer units produced by WARNER GEAR.

1931—Free wheeling was introduced to the industry by WARNER GEAR.

1934—Automatic overdrives for transmissions were introduced by WARNER GEAR.

1938—Borglite and Torbend clutch plates were introduced by BORG & BECK, LONG and ROCKFORD.

1949—Simpler, finer, more efficient automatic transmissions were introduced by DETROIT GEAR and WARNER GEAR.

1952—LP-Gas carburetion systems developed by MARVEL-SCHEBLER.

1953—Passenger car power brakes developed by MARVEL-SCHEBLER.

REPLACE WORN CHAIN



with

MORSE TIMING CHAINS

*the original
equipment line*

Quiet

Smooth

Dependable

Accurate

There are good profits for you in precision-built Morse Timing Chains—the line used as original equipment on eleven of the thirteen cars using timing drives today.

There are good profits, but no handling headaches. All Morse Timing Chains in excellent availability for quick delivery on your orders. All chains attractively boxed; all boxes plainly marked for quick spotting, neat storage on shelves, easy inventory. Heavy stocks warehoused in principal cities.

MORSE



MECHANICAL
POWER TRANSMISSION
PRODUCTS

Distributed in U.S.A. through Borg-Warner
Service Parts Corp., 310 Michigan Ave.,
Chicago 4, Ill.

Distributed overseas through Borg-Warner
International Corp., 79 E. Adams St.,
Chicago 4, Ill.

MORSE CHAIN COMPANY

QUIETER OPERATION

SMOOTHER PERFORMANCE

BETTER SERVICE

LONGER LIFE



For more than 35 years the Automotive Industry has found you can always depend on clutches by

BORG & BECK®

For that vital spot where Power takes hold of the load!



The Standard Clutch—A Product of Borg-Warner



BORG & BECK Division

Borg-Warner Corporation
Chicago, Illinois

22

OF THE

32

**BORG-WARNER
DIVISIONS AND
SUBSIDIARIES**

*Serve
the
automotive
industry*



BORG & BECK—clutches and torque converters for passenger cars, trucks and tractors.

BORG-WARNER INTERNATIONAL—export sales of automotive parts.

BORG-WARNER, LTD. (England)—Automotive timing chains and sprockets.

BORG-WARNER SERVICE PARTS—U. S. distribution of automotive service parts.

CALUMET STEEL—special automobile jack bar steel; small angles for auto seats.

DETROIT GEAR—automatic transmissions for passenger cars and trucks; truck, tractor and bus transmissions; gears and precision parts for passenger cars, trucks, tractors and aircraft.

FRANKLIN STEEL—special automobile jack bar steel; spring steel bumper supports; small angles for auto seats.

INGERSOLL PRODUCTS—tapered steel discs for truck wheels; automotive stampings; bumper and stabilizer bars.

INGERSOLL STEEL—automotive and tractor clutch discs; carbon electric steel for tank clutch plates; high carbon and alloy steel sheets; stainless and stainless-clad sheets and armor plate.

LONG MANUFACTURING—clutches and radiators for passenger cars, trucks, buses and tractors; torque converters; oil coolers for the automotive industry.

LONG MANUFACTURING CO., LTD. (Canada)—Clutches and radiators for passenger cars, trucks, buses and tractors; oil coolers for the automotive industry.

MARBON CHEMICAL—adhesives for bonding rubber and synthetic rubber to metal and other materials (trade name Ty-Ply).

MARVEL-SCHLEBLER PRODUCTS—carburetors for military and industrial equipment and farm tractors; LPG carburetion systems; power brakes for passenger cars and trucks.

MECHANICS UNIVERSAL JOINT—universal joints and propeller shafts for passenger cars, trucks, buses, aircraft, farm machinery, tractors, road machinery and mining machinery.

MORSE CHAIN CO.—automotive timing chains and sprockets.

MORSE CHAIN OF CANADA, LTD.—automotive timing chains and sprockets.

PESCO PRODUCTS—electric driven and engine driven hydraulic pumps; valves and electric motors for agricultural and industrial use.

ROCKFORD CLUTCH—spring-loaded and over-center clutches for automobiles, trucks, tractors, road-building, earth-moving and oil field machinery, industrial machinery, agricultural implements, machine tools (Pullmore). Power take-off and gear reduction units for gasoline and diesel engines.

SPRING DIVISION—torque converter parts and sub-assemblies; sprag type free wheeling clutches; special clutch plates and parts for automatic transmissions; precision flat and Belleville type springs; automobile clutch and valve springs; multislide and punch press stampings, plain and heat treated; special commercial heat treating; small electric motor commutators.

WARNER AUTOMOTIVE PARTS—for replacement purposes—ring gears and pinions; differential cases; differential internal gears and spiders; axle shafts; cast iron parts; transmission gears for passenger cars, trucks and tractors; power take-offs.

WARNER GEAR—automatic transmissions for passenger cars; standard transmissions for cars, trucks, taxicabs, buses and tractors; overdrive units for passenger cars; transfer drive transmissions for trucks; synchronizer units for passenger cars and trucks; parking brake assemblies.

WARNER GEAR CO., LTD. (Canada)—synchronizer units for passenger cars and trucks.

**BORG-WARNER
CORPORATION**

310 SOUTH MICHIGAN AVENUE—CHICAGO 4, ILLINOIS

Horsepower Continued from Page 41

lowest compression ratio is 8 to 1. Although Studebaker engines alone have a ratio of 7.8 to 1 they offer an option of 8.3 to 1.

The general level of bore/stroke remains about the same, although the tabulation shows four basic engines with ratio less than unity. Top ratio remains the same as last year at 1.25 to 1 for Buick and

Chevrolet, but marks the addition of the Buick 40 engine in this top rating. Another gain is found in the case of Pontiac where the bore/stroke ratio has been increased from 1.15 to 1, to 1.21 to 1.

Generally speaking, engine designers have employed their skills in boosting horsepower ratings without increasing the size of the

power package materially, except in the few instances where engine displacement was increased primarily to gain torque ability.

Engine output has been increased in various ways: by boosting compression ratio; by further streamlining of combustion chambers; by further improving breathing; by the introduction of four-barrel carburetors and twin exhaust systems; and by other means. Breathing, in particular, has been improved by increasing valve lift, by increasing valve diameters, by opening up intake and exhaust port diameters, and by streamlining all of the gas passages.

It is apparent that engine designers still have a long way to go in the employment of these devices before reaching practical limita-



use only
**FACTORY NEW
GENUINE
BENDIX DRIVES
and
PARTS!**



Repeat business is the foundation on which service profits are built. One of the surest ways to keep customers coming back time and time again is to use only genuine parts in your repair work. When you service Bendix® Drives, be sure to use only *factory new* Bendix Drives and Parts. Your customers will get the same dependable performance built into every original Bendix Drive—performance proven by over 100,000,000 installations. Insist on *factory new* Bendix Drives and Parts when you order from your distributor. ®REG. U.S. PAT. OFF.

Bendix Drive

ECLIPSE MACHINE DIVISION of
ELMIRA, NEW YORK

Export Sales: Bendix International Division, 205 East 42nd St., New York 17, New York

Bendix
AVIATION CORPORATION



tions such as a limit to valve diameters and valve lift. Fortunately, the current design of V-8 engines has enormous flexibility. Where practical limitations are reached in some direction, it is always feasible to increase displacement without any serious cost penalty even with the present use of costly transfer type manufacturing equipment.

On the other hand, considering the wave of safety drives, and widespread criticism of the continuing horsepower race, one naturally wonders just how far the drive for higher horsepower ratings will go. Only the competing
(Continued on page 84)

Snap-on cures another case of "tools with legs"



"OK, young fella, here's the ***Snap-on*** man.
He can fix you up with the wrenches you need."

Yes, the tool borrower is one of the most irritating time and money wasters in any garage or repair department. And one of the best ways to stop "tools with legs" is to invite the *Snap-on* man in and urge your mechanics to talk to him. He not only provides a complete line of the finest tools available, but he knows tools and can help mechanics fill in and build up their sets.

You'll find your men depend on *Snap-on*. His regular calls remind them to buy now

instead of later. *Snap-on* also provides a complete line of shop equipment, and special tools for specific model and make cars that can help speed tricky jobs—earn more money for both the garage and the mechanic.

Make it a point to talk to the *Snap-on* man the next time he calls. Let him explain the various plans that can help your mechanics own a complete set of the right tools.

SNAP-ON TOOLS CORPORATION

8036-A 28th Avenue • Kenosha, Wisconsin

*Snap-on is the trademark of Snap-on Tools Corporation.



Horsepower Continued from Page 32

manufacturers have the answer.

Practical Limit

From an engineering standpoint, there must be a practical limit as to the physical size of the powerplant of the future. Obviously, there is a limit to the displacement and installation dimensions of engines that already crowd the un-

derhood compartment. Perhaps now is the time to consider engines of smaller displacement, utilizing some advanced form of turbocharger to boost horsepower rating.

Another important consideration is that of gas tank economy as contrasted with specific fuel economy. With the cost of gasoline at the highest levels, and exceedingly

high in Michigan, many owners are concerned about the cost of car operation.

Five years ago when the horsepower race began in earnest, the largest engines in the most expensive cars gave promise of fuel economy that was better than that of smaller cars of past years. With succeeding increases in horsepower ratings, however, the actual tank economy has been going down to the point where 18 mpg is no longer common. In city driving, fuel economy has become quite low and is becoming a matter of concern.

Smaller Engines

In fact, many car owners are beginning to think in terms of lighter cars and smaller engines. Perhaps that explains the increasing demand for the small foreign cars, even though the actual population of such cars is too small to worry about at the moment.

Unquestionably there are new developments in the offing that promise improved economy without sacrificing performance or any compromise in the size of the big cars the public wants. One of these is solid fuel injection. From what we can gather, practical fuel injection systems are closer at hand and may be available in the near future. Although the mechanism is more expensive, volume production can do much to get costs down to a reasonable level.

We understand that turbochargers of advanced type will be available, capable of boosting engine output around 100 per cent. This would make it possible to build engines of much smaller displacement, although they will have to have a structure capable of coping with about the same loading as present engines.

Here, too, cost is a major consideration but may be much more favorable with volume production. On the other hand, the combination of solid fuel injection and turbocharging may have enough favorable economies to justify higher costs at the outset.



...the difference can be
Herbrand Tools

He wants his car—now!

Keep your customer happy—use Herbrand job-engineered tools. Speed your work, as they do at the "500," where seconds count . . . and where mechanics acclaim Herbrand Tools for their important time-saving qualities.

In your daily race against deadlines, Herbrand Tools can make you a winner. For 75 years, master mechanics have looked to Herbrand for leadership in tool engineering. See your jobber now.



NEW TOOL OF-THE-MONTH

"HI-FI" MULTISCOPE MS-1
Permits positive analysis of trouble points that the unaided human ear cannot recognize. Buy a Multiscope now! Mechanic's net \$5.95



OFFICIAL TOOL OF THE "500" MECHANIC

Herbrand Tools

FREMONT, OHIO



He that waits upon fortune
is never sure of a dinner.
Benjamin Franklin

Only
Chevrolet Dealers have
this hottest
of all hot products!

the new
'56 Chevrolet



You'll profit most with Chevrolet... America's foremost automotive franchise

Chilton's MOTOR AGE, JANUARY, 1956

*An outstanding reason
why you'll profit most
with Chevrolet...
America's foremost
automotive franchise!*

■ Today, everybody and his brother know it: *The hot one's even hotter!* . . .

The public knows it. Car dealers in general know it. And Chevrolet dealers in particular know that their competitive position is stronger than ever!

For the new 1956 Chevrolet brings passenger car buyers all the following major advances in addition to the many other fine features which made the '55 Chevrolet America's favorite car:

19 new models . . . all with bold new Motoramic styling—including two new 4-door hardtops and two new 9-passenger station wagons . . . the broadest, most brilliant choice in Chevrolet's field!

New wider, more massive grille . . . longer, sleeker, more rakish hood . . . luxurious new Contemporary Interiors . . . an almost unlimited variety of glamorous new color treatments!

New excitement under the hood . . . V8 or 6-cylinder engines with new high compression ratios . . . giving even greater power, even livelier acceleration, even more of the championship road-action for which Chevrolet is noted!

Extra safety, extra driving thrills in this Pikes Peak Record Breaker which *pre-proved* its performance, handling ease and nailed-to-the-road stability by setting a new world's record for stock cars in the Pikes Peak run!

All the automatic power servants that any buyer could ask!

Think it over and we believe you'll agree: With this great new product, Chevrolet dealers have every reason to look forward to continued leadership in passenger car sales in 1956. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Quick Service Continued from Page 45

and the other two leads of the timing light to the battery terminals. Clean the dirt from the timing marks and, if necessary, chalk the proper mark and the pointer to improve legibility. Operate the engine at idle speed.

The timing light should flash just as the proper mark lines up with the pointer, indicating correct

timing. The operator's eye should be in line with the center of the damper and the timing pointer. If the proper timing mark and the pointer do not line up, rotate the distributor until the correct mark and the pointer are in line.

The timing is advanced by rotating the distributor body clockwise and it is retarded by counter-

clockwise rotation. After the ignition timing has been properly set, connect the distributor vacuum line, then check the distributor to determine if the advance mechanism is operating. To do this, hold the timing light on the timing marks and pointer, and accelerate the engine.

If no advance is evident, one of the following is probably the cause: No vacuum advance; vacuum advance diaphragm leaking or disconnected from the breaker plate; breaker plate binding in the housing or on the bushing.

Spark Control Valve

The spark control valve retards the distributor advance during acceleration at low speeds to prevent excessive pinging. When the throttle is opened to a setting greater than that required to maintain existing engine speed, manifold vacuum drops off sufficiently to permit the spark control valve to close, cutting off the manifold vacuum passage to the distributor, thereby providing the spark retard needed to prevent objectionable ping. As engine speed approaches the throttle setting, manifold vacuum builds up sufficiently to open the spark control valve, permitting manifold vacuum to effect the advance of the spark timing to meet engine requirements.

Checking and setting valve lash: Run engine at least 30 minutes at approximately 1200 rpms to stabilize engine temperatures. Clearance should be .018 inch.

If heads and rocker arms have been removed for any reason a preliminary valve adjustment should be made first.


Start off by making three chalk marks on the crankshaft damper. Space the marks approximately 90 degrees apart so that with the timing mark, the damper is divided into four equal parts (90 deg. represents $\frac{1}{4}$ turn of the crankshaft or $\frac{1}{4}$ of the distance around the damper circumference.) Rotate the crankshaft until number 1 piston is near top dead center at the end of the compression stroke and the timing mark on the damper is aligned with the timing pointer. With the engine in this position


(Continued on page 90)



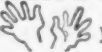

DOUBLE PROFITS


with **JOHNSON** adjustable tappets


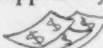
The right time to install **JOHNSON Adjustable Tappets**  is anytime you have the head

off a 1932-1953 Ford or Mercury or a 1952 or earlier model Ford Tractor.  By

recommending and installing **JOHNSON Adjustable Tappets** at this time you can make **TWO PROFITS on ONE JOB**. And installing **JOHNSON TAPPETS** is easy. All you need is a pair

of hands  your 7/16" Tappet Wrench, Feeler gauge  and the Spanner Wrenches

 that come free with each set of **JOHNSON Adjustable Tappets**. Stock several sets of **JOHNSON Adjustable Tappets** in your shop.

 You will find they are money makers  for you.

Ask Your Jobber For **JOHNSON ADJUSTABLE TAPPETS**

"Tappets are our business"

JOHNSON  PRODUCTS

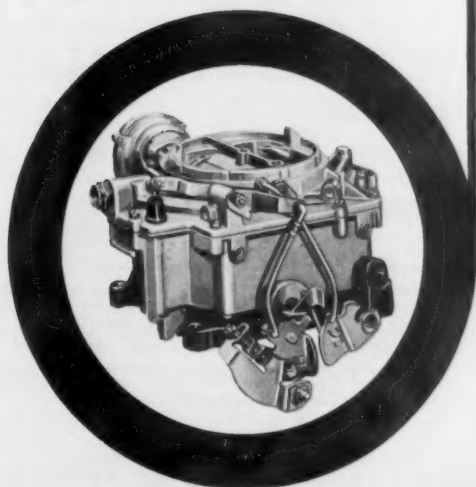
INC.
MUSKEGON, MICHIGAN



If all cars with Rochester Carburetors were painted orange...



the Los Angeles Freeway would look like this!



Rochester gives 'em the gas! Nearly half the new cars on the road today are "fed" by Rochester Carburetors. These modern high-compression engines are assured of the right mixture of gas and air to deliver top performance in every driving situation. Rochester Carburetors are rugged and responsive from pickup to passing speed . . . in freezing cold or blazing heat. They're dependable, durable and specifically designed to feed the world's finest engines. That's why you'll find Rochester Carburetors on the new Cadillac, Buick, Oldsmobile, Pontiac and Chevrolet!

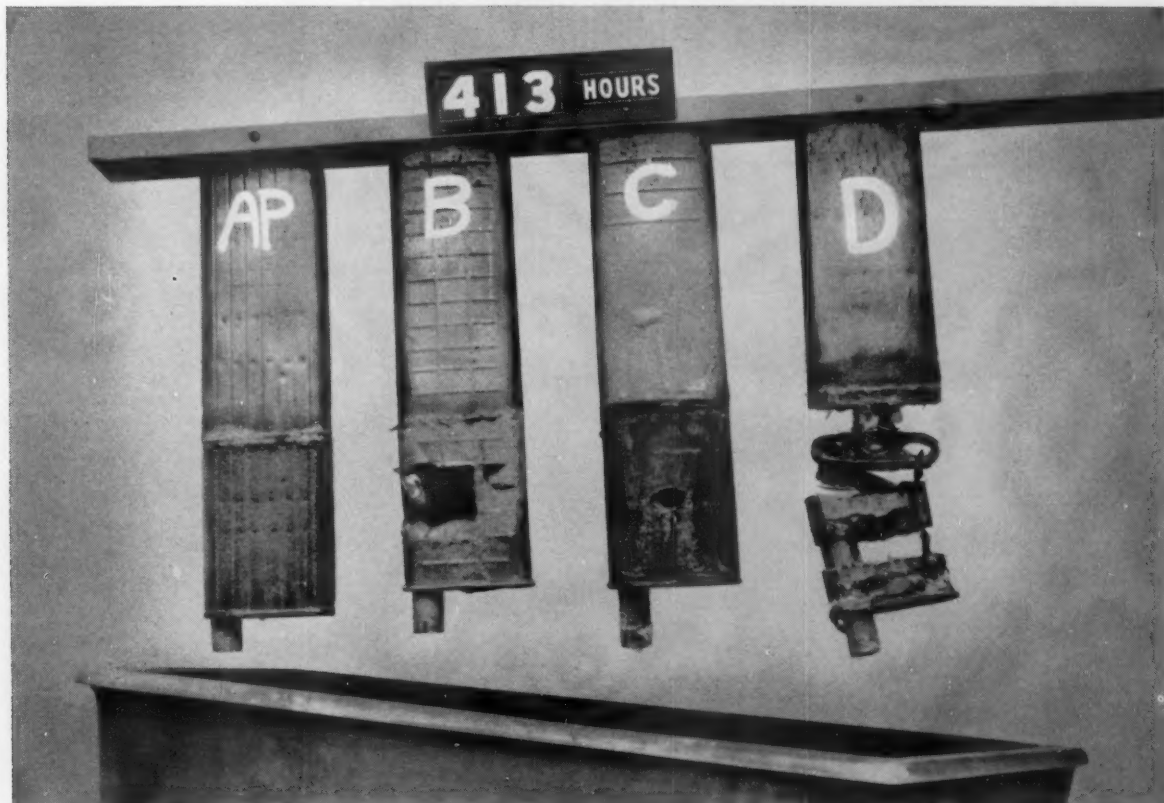
CARBURETORS BY **ROCHESTER**

ROCHESTER
PRODUCTS
DIVISION OF
GENERAL MOTORS
CORPORATION
ROCHESTER N.Y.



TRIAL BY TORTURE PROVES THAT

Profit with AP's product advantages—



In recent tests conducted by Motor Vehicle Research, the AP muffler and three other leading makes were soaked in corrosive acid like that found in actual operation. Compare the results!

Comparison tests recently made by Motor Vehicle Research prove that AP mufflers are engineered for longest life, plus maximum silence and lowest back pressure. They prove that the advance-design AP muffler, *at no extra cost*, will enable your customers to get more horsepower, better gas mileage, and $\frac{1}{3}$ longer life. In every test made, the AP muffler excelled the three leading competitive mufflers, including the car factory replacement. There are good reasons why. It has up to 40% heavier steels, double crimp-locked seams, high-frequency-control intermediate shell. Seam-welded inner tubes with extruded holes make it practically clogproof. Its patented $\frac{1}{3}$ thicker "Air Liner" shell, featured on over 70% of all AP mufflers, creates sound-deadening chambers that insulate against both heat and noise.

Get your share of the big muffler business. It's a business that's expanding, thanks to duals, every day—this year the big majority of car manufacturers will feature

dual exhausts on their new models. Join AP's effective TAP, LOOK and LISTEN program. Just register as an AP Muffler Specialist with your AP wholesaler; put in a minimum basic stock; then examine every muffler that comes into your shop. Do it systematically and you'll make at least six extra sales a week for the next 50 weeks—a total of \$2100 extra profit, because *one out of every two cars* you service will need a muffler or a pipe*—or both.

Ask your jobber to show you the AP "Inside Story." It's an eye-opener.

*Shell Oil survey of retail sales potential for 1956

8 out of 10 AP Mufflers have these extras

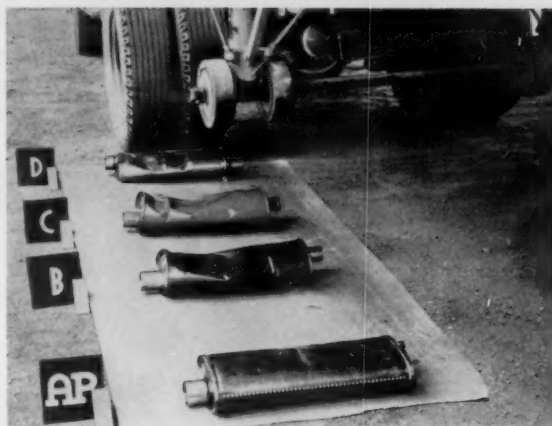
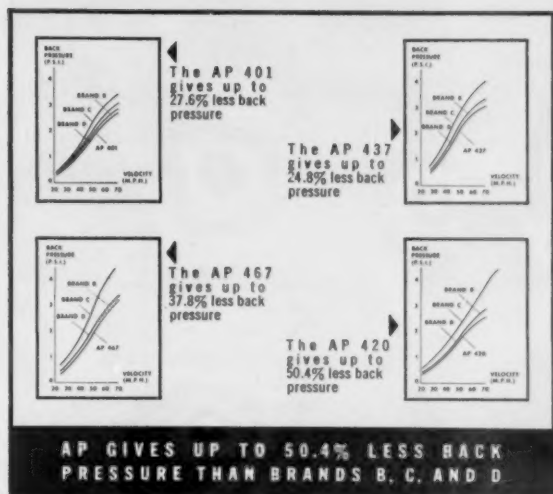
One or more of the following features, depending on the job to be done, will be found on 8 out of 10 AP mufflers: $\frac{1}{3}$ thicker steel, specially coated, corrosion-resistant steels, triple shells, "Air Liner" shell, asbestos liner.



LONGER-LASTING MUFFLERS — DESIGNED FOR TODAY'S

AP MUFFLERS LAST 1/3 LONGER

become an AP Muffler Specialist



In this MVR test designed to prove sturdiness, another AP passenger car muffler (foreground) withstood this crushing 4720 lb. wheel load far better than the other leading brands.

WEIGHT CHART

Brand	Ford	% AP Is Heavier	Plymouth	% AP Is Heavier	Chev.	% AP Is Heavier
AP	13 lb/14 oz		15 lb/9 oz		10 lb/12 oz	
B	12 lb/12 oz	8.8	12 lb/2 oz	28.3	7 lb/11 oz	39.8
C	10 lb/ 4 oz	35.4	12 lb/7 oz	25.1	9 lb/	19.4
D	11 lb/ 6 oz	21.9	12 lb/8 oz	24.5	8 lb/ 9 oz	25.5

AP WILL PROVIDE ALL THE SALES AIDS YOU NEED TO GET BUSINESS



Your initial sales package will include a "How to" booklet, posters, post cards, inspection tags, a decal, a catalog, and price sheets. Then AP mails direct to you a constant flow of additional sales aids, and up-to-date catalog data.

THIS FREE SIGN IDENTIFIES YOU . . .

Put it up where it will be seen. Then TAP, LOOK and LISTEN the easy AP way for muffler profits.



THE AP PARTS CORPORATION

3-N AP Building, Toledo 1, Ohio
Mufflers and Pipes • Miracle Power • dgf 123

AND NATIONAL ADS WILL FEATURE IT



The ads will dramatize tests like those shown on these pages. Hundreds of your customers and prospects will read them and decide to look for the sign of the AP Muffler Specialist.

HIGH-COMPRESSION ENGINES

Chilton's MOTOR AGE, JANUARY, 1956

Quick Service Continued from Page 86

adjust the following valves: No. 1 exhaust, 4 exhaust, 5 exhaust, No. 1 intake, 2 intake, 7 intake.

Rotate engine 180 deg. or 1/2 turn (this puts number 4 piston on T.D.C.) and adjust the following valves: No. 6 exhaust, 8 exhaust, 4 intake and 5 intake.

Rotate the engine 270 deg. or 3/4 turn from 180 deg. (this puts

number 3 piston on T.D.C.) and adjust the following valves: No. 2 exhaust, 3 exhaust, 7 exhaust, 3 intake, 6 intake, 8 intake.

Distributor Removal

Distributor is mounted at the rear of the engine and is held in place by a clamp and a cap screw.

Before removing the distributor

from an engine which is properly timed, a mark should be scribed on the distributor housing indicating the rotor's position and another mark on the cylinder block and distributor housing to indicate the position of the housing. Using these marks the distributor can be installed without changing the ignition timing.



**"I MADE
\$14,839
LAST YEAR...
SERVICING
RADIATORS!"**

—Rex Ryan, Bloomfield, Iowa

INVESTIGATE THE HUGE PROFIT POTENTIAL

Rex did all his own work, operating in a former coal house at his home. With only 4,117 cars and trucks in his county! He says: "Last year, income from labor was \$10,790, material sales were \$4,049. The first 3 months after installing Inland equipment, my business paid two-thirds of the cost!"

TREMENDOUS OPPORTUNITIES! Town Auto Co., Allentown, Pa., made over \$13,000 in 1 year! A Rapid City, So. Dak. shop made \$2,072 in 1 month!

Few automotive services offer such a potential for new and expanded business. Of the 60-million vehicles in the U.S., over 20-million require radiator service yearly. Inland-developed equipment allows you to use highly profitable production methods. And Inland offers the only complete package—equipment, training, merchandising.

FREE TRAINING SCHOOL

Practical factory school trains you or your man quickly. Cleaning, repairing, re-coring, pricing, merchandising—everything! Hundreds of graduates now expert radiator repairmen. FREE to Inland customers!

"Training was thorough" says L. J. Messer Co., Lincoln, Nebr. "Excellent training!" says R. E. Barber, Inc., Holland, Mich.

MAIL TODAY!

New free 48-page "Blueprint for Profit" gives you experiences of many of the thousands all over the nation making an EXTRA \$8,000 to \$15,000 a year, details and prices of required equipment, Inland's "Pay-For-Itself" payment plan. Invest a minute to mail the coupon—the rewards can be amazing!

INLAND Mfg. Co., 1108 Jackson St., Dept. MA-1, Omaha 8, Nebr.

World's Largest Manufacturer of Radiator Servicing Equipment
"SOLD EXCLUSIVELY BY MAIL!"

**INLAND MFG. CO., Dept. MA-1
1108 Jackson St., Omaha 8, Nebr.**

Please send new free booklet "Blueprint for Profit"

FIRM _____ PLEASE PRINT

ADDRESS _____

CITY _____ ZONE _____ STATE _____

BY _____ TITLE _____

If Dealer, make of car sold _____

Are you now operating a radiator shop ☐ Yes ☐ No

Duane Carter Named As Racing Director

Duane Carter of Speedway City, Ind., a popular driver with many years of experience in all types of auto racing, accepted appointment recently as Director of Racing for the United States Auto Club on a full-time basis.

It is Carter's responsibility to carry out the general policies of the new organization, which succeeded the Contest Board of the American Automobile Association as the governing body of racing on Jan. 1, 1956.

The 42-year-old Carter, whose home is in Speedway City, started his racing career on California tracks in 1932 while studying mechanical engineering at Fresno State College. He is a veteran of eight 500-mile races at the Indianapolis Motor Speedway and the last three Mexican road races.

Never stand begging for that which you have the power to earn. Cervantes



Ralph C. Hook, Jr., manager, Hook Buick Company, Lee's Summit, Mo.

"Recommending Royal Triton is good business"

"We've made a lot of steady and satisfied service customers by recommending Royal Triton Motor Oil for their new Buicks.

"No other oil we know of keeps valve lifters so free and engines so clean as Royal Triton. That's why we've used it exclusively in our personal cars and demonstrators for about four years now."

The experience Ralph Hook has had with Royal Triton Motor Oil is typical. Auto dealers and service managers all over the country report greater customer satisfaction and confidence when they recommend *amazing purple* Royal

Triton. Your nearby Union Oil representative will give you prompt delivery of both 5-20 and 10-30 grades. Order Royal Triton for *your* service department today.

UNION OIL COMPANY
OF CALIFORNIA



Los Angeles: Union Oil Bldg. • New York: 45 Rockefeller Plaza • Chicago: 1612 Bankers Bldg. • New Orleans: 644 National Bank of Commerce Bldg. Atlanta: 401 Atlanta National Bldg. • Kansas City, Mo.: 612 W. 47th St.

Hawks Continued from Page 47

Hawk and Power Hawk models.

Golden Hawk

The Golden Hawk, top model in Studebaker's special line of sports-type models, has a 275 hp V-8 engine with a displacement of 352 cu in. At 2800 rpm the engine develops 380 lbs-ft of torque.

This power plant has four-barrel

carburetion and a compression ratio of 9.5 to 1. The Golden Hawk offers the Studebaker-Packard Ultramatic transmission as optional equipment, the other three Hawk models using the new Studebaker Flightomatic transmission as an option.

The Ultramatic has dual driving ranges—one for fast starts, the

other for slower, smoother starts. A special feature in the Ultramatic is the "double kickdown" power. Depressing the accelerator while traveling up to 60 mph gives normal passing acceleration; full depression up to 60 mph sends the car forward with an added burst of speed.

The Sky Hawk is powered with a 210 hp V-8 engine which has a displacement of 289 cu in. At 2800 rpm this engine develops 292 lbs-ft of torque. The Sky Hawk's power plant has four-barrel carburetion and a compression ratio of 7.8 to 1 with an optional compression ratio of 8.3 to 1 available.

The Power Hawk's V-8 overhead valve engine develops 170 hp. With an optional power kit with a four-barrel carburetor, horsepower can be upped to 185. Compression ratio is 7.8 to 1 with the 8.3 to 1 option the same as the Sky Hawk.

The Flight Hawk is powered with an L-head six cylinder engine that develops 101 hp. Compression ratio here is 7.8 to 1 and at 1800 rpm, the engine develops 152 lbs-ft of torque.

All models have a new 12-volt electrical system, with output of the generator raised to 30 amperes at 12 volts to meet the increased demands of new automatic and electrical features drawing on the electrical system.

A full range of optional power equipment is available, including power steering, power brakes, power window lifts and power seats. Studebaker power steering, report Studebaker engineers, while doing up to 80 per cent of the work, retains sufficient road feel to assure safe operation. The Studebaker system also features mechanical cut-in safety. If power steering at any time becomes inoperative, mechanical steering takes over automatically so that the driver retains full control of the car.

The oil pump capacity of the Sweepstakes V-8 engines has been increased by 50 per cent. The new engines have mechanical type valve lifters, heavy-duty connecting rod bearings, and a special alloy camshaft. Larger alloy inlet and exhaust valves permit greater breathing efficiency.

No Profit When This Customer Came Back

**FOR YOUR PROTECTION
INSIST ON **SUNNEN**
MEASURED PIN FITS**



Piston Failures are Expensive . . . In Loss of Profit and Loss of Good Will

Many piston failures have been traced to incorrect Pin Fits which do not allow cam-ground pistons to expand properly, resulting in scored and broken pistons.

Whether you fit your own pins or send the work out, we can help you eliminate practically all comebacks from piston scuffing and scoring.

Our 24-page booklet "Just What Is A Pin Fit" gives the complete story, with many illustrations of actual piston failures and their causes. Endorsed by piston, ring and car manufacturers—200,000 requests already filled—why not drop us a card for your own free copy.

Why not insist on the best . . .

**Specify Sunnen Precision Pin
Fitting Equipment**



SUNNEN PRODUCTS COMPANY

7918 Manchester Ave. • St. Louis 17, Mo.
Canadian Factory: Chatham, Ontario



ONLY THOR OFFERS AN IMPACT WRENCH FOR EVERY JOB!

Automotive service industry's
largest choice



THOR NO. 55 SPEEDWRENCH

The fastest selling impact wrench on the market

ELECTRIC IMPACT WRENCHES



THOR EW-6
SILVERLINE 1/2" SQUARE DRIVE



THOR EW-10
SILVERLINE 3/4" SQUARE DRIVE



RIGHT ANGLE ATTACHMENT

Can be used on ANY 1/2" Square Drive impact wrench either air or electric. Compact size assures reaching those hard-to-get places in engine and body work.



Kits available including tools, carrying case, variety of hexagon sockets.



Chilton's MOTOR AGE, JANUARY, 1956

INCREASE your profits and speed up bolt setting and removal on engine and wheel jobs—body and frame work.

Pick out the impact wrench you want and ask your Thor automotive jobber for a free trial.

Remember all Thor automotive air and electric tools can be purchased on an easy payment plan.

AIR IMPACT WRENCHES



THOR A2W
1/2" SQUARE DRIVE



KITS AVAILABLE FOR A2W and A4W

including tool, wrenches, right angle attachments, six sockets of varying size and metal carrying case.



THOR A4W
3/4" SQUARE DRIVE



THOR A5W
1" SQUARE DRIVE

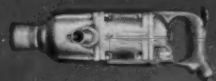


RIGHT ANGLE ATTACHMENTS

For A2W, A4W, A5W
Detachable - Adjustable
to 6 Positions



THOR HEAVY DUTY
48HG WRENCH
1" Square Drive—handles
3/4" bolt capacity.



THOR HEAVY DUTY
A7W WRENCH
1" Square Drive—handles
1 1/4" bolt capacity.

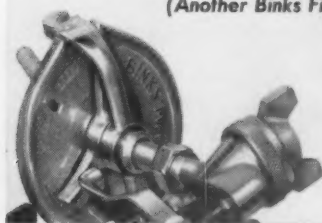
THOR POWER TOOL COMPANY Aurora, Illinois

Atlanta • Birmingham • Boston • Buffalo • Chicago • Cincinnati • Cleveland
Denver • Detroit • Houston • Los Angeles • Milwaukee • Newark
Long Island City, N.Y. • Philadelphia • Pittsburgh • St. Louis • Seattle
San Francisco • Toronto, Canada • Export Division, New York City

WHAT'S NEW in siphon cups

Binks' new graduated siphon cup

(Another Binks First)



...for accurate paint reduction

Now...you can reduce paint... quickly, easily and accurately ...with Binks' new Model L-47 graduated siphon cup. You eliminate guesswork and messy, wasteful measuring containers...and gain savings in time and materials. This Binks "first" gives you all of these advantages...at no additional cost.

Clearly stamped impressions mark 1-to-1, 2-to-1, and 3-to-1 ratios, as well as the 1-quart level. Each marking is well rounded on the inside of the cup for legibility and for easy, complete cleaning.

A steel reinforcement protects the base of the spun aluminum cup from damage during rough

production usage. The rolled edge of the top opening strengthens the rim of the cup and insures a good seal on the gasket. The large mouth makes thorough cleaning easy.

FITS ALL SIPHON-TYPE SPRAY GUNS—Binks' Model L-47 cup, with Model 81-400 attachment, can be used with all Binks' siphon-type spray guns, and other makes having a $\frac{3}{8}$ " standard pipe thread fluid connection. With a Model 81-402 attachment this new cup can be used with guns having a $\frac{1}{2}$ " 20-thread connection.

ASK YOUR JOBBER

to show you this new cup...or write to the address below for a copy of Bulletin L-47.



603-55

Binks

EVERYTHING FOR

SPRAY PAINTING



GUNS



COMPRESSORS



FREE INSTRUCTION

Binks Manufacturing Company

3124-34 West Carroll Ave., Chicago 12, Illinois

REPRESENTATIVES IN PRINCIPAL U.S. & CANADIAN CITIES • SEE YOUR CLASSIFIED



DIRECTORY

Corvette

Continued from Page 49

vide greater pressures for the 10-inch clutch than the former diaphragm-type spring. The arched construction of the clutch and the seating of coil springs on raised ribs help to assure proper cooling.

Tubeless tire sizes remain at 6.70-15 but optional four-ply, high-speed nylon race-type tires are available.

New is the power-motivated fabric top which is standard equipment on the 1956 Corvette. It is controlled by a knob located beneath the instrument panel.

The top can be raised merely by pressing the knob. A lid located behind the two bucket-type seats opens, the top rises, the lid closes and the top unfolds. The process is reversed in stowing the top away. The lid swings open, the top folds itself into the well and the lid drops back into position.

For snuggler, cold weather motoring, Chevrolet supplies the solid top as optional equipment. The top is trimmed in bright metal and contains fixed rear quarter windows and a wrap-around rear window for exceptional visibility. Built of the same light, reinforced glass fibre plastic as the body panels, the top can be easily lifted on or off. Latches secure its forward edge to the windshield and the rear is rigidly attached by five knurled set screws.

A wide range of exterior and interior colors is available. Exterior colors are black, red, green, copper, blue and white, with the cockpit color-keyed in beige or red. Fabric tops, which fold neatly under a lid back of the two-seated passenger compartment, are offered in white, black or beige, to harmonize with exterior paint color.

Ohio ADA Elections

Ohio Automobile Dealers Association at their 22nd annual convention elected the following officers for 1956: E. A. Molenske, president; Edgar G. Planck, 1st vice pres.; M. R. Purdy, 2nd vice pres.; Dan D. Gross, secretary; and F. E. Williamson, treasurer.

Chilton's MOTOR AGE, JANUARY, 1956

There's an AC Cap to fit most of your customers' needs . . .



AC GAS TANK FILLER CAPS, REGULAR AND LOCKING —
AC RADIATOR FILLER CAPS, REGULAR AND PRESSURE —
AC CRANKCASE FILLER BREATHER CAPS

Filler caps are always being lost, stolen, damaged, destroyed or just plain worn out. And there are so many millions of them in use that the replacement market is important to you. The AC line is engineered to highest standards and covers most automotive installations. Protect yourself with an ample stock of AC quality filler caps to meet your customers' needs.



Available quickly from your regular AC SUPPLIER

AC SPARK PLUG  **THE ELECTRONICS DIVISION OF GENERAL MOTORS**

Mr. Dealer Continued from Page 51

That, in essence, is what the dealers want.

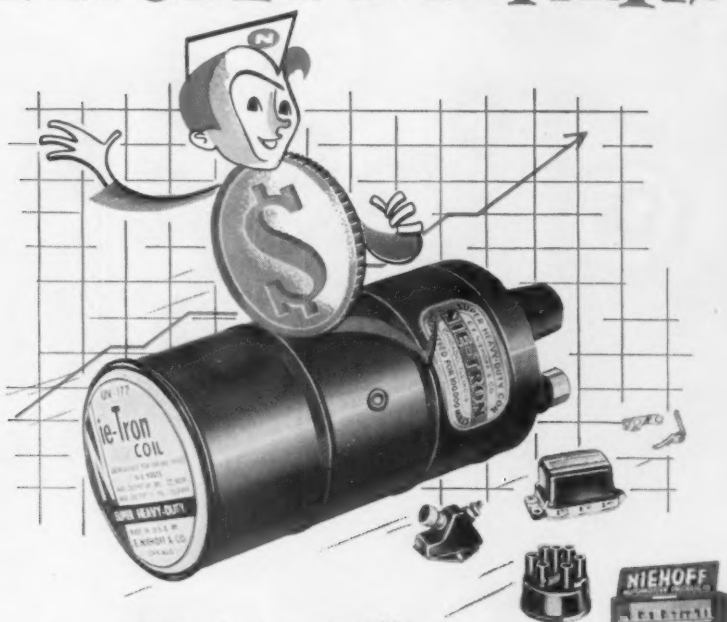
Welcoming competition, eager to take their chances with success or failure, they ask only for equality of opportunity.

NADA's desire is to help bring about a favorable climate within the industry, to create a situation where the dealer can measure his

performance against a pre-determined objective rather than a vague, broad, and loosley defined goal. It should be an attainable objective, with a bonus for outstanding performance, a penalty for performance which is sub-standard. There is need, too, for greatly improved communication between factory and dealer.

Get Aboard These NIEHOFF

PROFIT MAKERS



... says **Danny Dollar**

Sail through the year making more money installing Niehoff Ignition Parts. They're precision engineered to meet the exacting demands of your work. Complete line to fit all makes and models of cars, trucks, busses and tractors. Streamlined, instant reference catalog answers service questions at a glance. Ask your jobber.

C. E. NIEHOFF & CO.

4925 W. LAWRENCE AVENUE • CHICAGO, ILLINOIS

WAREHOUSES: NEW YORK 19, N. Y., 250 W. 54th Street
PHILADELPHIA, PA., 1631 Fairmont Ave. • BOSTON 34, MASS., 254 Brighton Ave.
BRANCHES: LOS ANGELES 15, CALIF., 1330 W. Olympic Blvd.

Therefore, the retailer's problems, which will determine the entire program of the NADA Convention, are many in number and scope. Operating a dealership at a profit under a sound business-like program is, to us, as important as removing many of the basic ills over which the dealer has little or no control. As with all NADA programs and activities what is presented at the coming Convention along this line will be geared to fulfill one of the major purposes of our association as stated in our certificate of incorporation, "to

Diner: You advertised that this restaurant was under new management, but I see the same manager still here.

Waiter: Yes, sir, but he got married yesterday.

promote a high plane of business for those engaged in the retail motor vehicle business," and, "to endeavor to raise to the highest degree the standards, ethics and practices of automobile merchandising to the end that the trade, through efficient management may enjoy the opportunity for profitable operation and the building up of financial security."

See First Hand

Thus, the dealer coming to the Convention will see, first hand, what is going on in Washington, and, we hope, that he will hear ideas and suggestions which he can carry home. The use of the ideas and suggestions in his business in years to come, as experience has shown, can spell the difference between success and failure, between profit and loss.

It's going to be a great Convention. We hope you'll be with us.

Paul T. Graves

Paul T. Graves, executive vice president of the Detroit Automobile Dealers Association, died in Detroit on Nov. 30. On Nov. 21, Mr. Graves had suffered a heart attack.

A director of the Michigan Automobile Dealers Association, Mr. Graves managed four Detroit Automobile Shows—1939, 1940, 1954 and 1955.

Chilton's MOTOR AGE, JANUARY, 1956



HOLLEY'S NEW PLANNED PROFIT PACKAGE

COMPLETE MERCHANDISING KIT FREE

Holley's new Planned Profit Package contains everything you need to bring new customers, new prospects right to your door! Designed to sell tune-ups, ignition equipment and carburetors for *all* makes, as well as for Holley equipped cars, the new Planned Profit Package contains all of these sales producing items:

Free Poster: Attention-getting size—22 x 35 inches.

Free Mailing Cards: 30 colorful mailing cards—10 each of 3 specially designed cards.

Gas Mileage Book: "Tips on Getting More Gas Mileage."

Factory-to-You Mailings: Each Profit Package contains a postage-free return card. When you fill it out, you will be placed on Holley's special factory-to-you mailing list.

Holley's new Planned Profit Package is available free with the purchase of 2 Holley R-713-AAS carburetors—the model with the largest application of any carburetor ever produced by Holley. It fits all Ford V-8s, 1934-53, and all Mercurys 1939-48. There is nothing else you need to buy. Levers and brackets from the old carburetors may be used for the simple modifications necessary—or, your nearest Holley distributor can offer a choice of conversion kits that contain new levers and brackets.

The sale of just these 2 carburetors will bring you a 66½% return on your original investment of \$19.20*—PLUS installation charges and the additional services and equipment you'll sell at the same time. Call your Holley distributor today!

*Carburetor prices slightly higher in Canada.

RT-21



Holley's R-713-AAS carburetor is equipped with specially designed high lift nozzle bars which improve engine performance at extreme angles and eliminate percolation or "vapor lock".

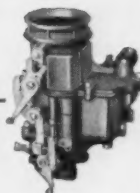
The entire cost of

Holley's Planned Profit

Package is only \$19.20—

Your net cost of two

R-713-AAS carburetors



HOLLEY
Carburetor Co.

11955 E. Nine Mile Road Van Dyke, Michigan

Progress Report . . . Continued from Page 43

groups were given until April first to ratify the Constitution and By-Laws at which time the Independent Garage Owners of America became a reality.

IGO Headquarters

The Independent Garage Owners of America, Inc., has headquarters at 3614 East 40th Street,

Tulsa, Okla. It is an organization of independent garagemen, and includes owners and operators of body, paint and trim shops, engine rebuilders, radiator shops, brake and wheel alignment service, general repair shops, and/or specialized repair shops of motor vehicles, who are not franchised automobile dealers.

In general, individuals become members of the IGOA by virtue of membership in an affiliated local or state association, or they may become individual members-at-large in a state where no organized unit exists.

Allied Members consisting of individuals, or firms, representing trades allied with the automotive repair business (other than franchised car dealers and car manufacturers) operating on a nationwide or area-wide basis.

As of April first, a five page letter was drafted for the purpose of explaining IGOA to the independent automotive parts manufacturers, inviting them to become Allied Members. Also articles from three trade magazines were multigraphed and seven hundred of these letters were sent to the independent manufacturers. Letters were written to Allied Trade Associations, to tell them the story of IGOA.

In the following seven months, the Executive Director traveled more than 35,000 miles by automobile, meeting with the various garagemen associations who were represented at Oklahoma City, attended the Southwest Show and the Southeast Show, visited many manufacturers of automotive replacement parts at these two shows and later at many of their factories.

In August of last year the first meeting of the Board of Directors was held at the Alvin Hotel, Tulsa, Okla. This was a two day meeting, the big job was to make revisions in the By-Laws, to set up definite procedures and the selection of an official emblem. At this time membership of IGOA included operators in Alabama, Arizona, Arkansas, California, Kansas, Massachusetts, Michigan, Missouri, New Mexico, Ohio, Oklahoma, Pennsylvania, Texas and Washington. Allied Members (independent parts manufacturers), had increased to fourteen.

September Meetings

In September, the Executive Director met with a new group at Chattanooga, Tenn. In Pennsylvania (Continued on page 102)

Own a Harley-Davidson Servi-Car . . .



keep jobs rolling through at close to 100% capacity

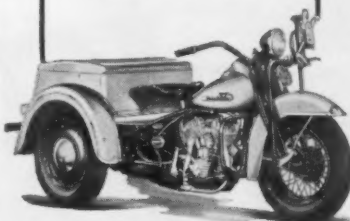
Servi-Car helps you build total volume, even out work loads

Fast, low-cost Servi-Car pick-up and delivery not only expands your business territory, it also helps you move jobs in and out in less time with less fuss. Servi-Car also helps you retain more of the business that usually wants to "try to find a shop that can do the job right away."

Be sure you have the complete story on how Servi-Car has become the automotive repair and service business's best bargain for bigger profits. See your Harley-Davidson dealer or write for free booklet "It Pays to Give Service." HARLEY-DAVIDSON MOTOR CO., Dept. MA, Milwaukee 1, Wis.

NEW 1956 Models

feature engineering
advancements that
offer better service,
greater economy



New low prices!
Excludes tax now off

SERVI-CAR SERVICE SELLS MORE SERVICE

FRAM "DYNAMITE" DEAL - *The* D-46

You Buy the Deal—
Get 4 C-4 Cartridges **FREE**



It's the deal that pays off in extra profits! All you buy is 20 C-4 and 6 CH-6PL Cartridges—and you get 4 C-4 Cartridges FREE! All in one package—30 of the most popular, fastest-selling cartridges in the world! Ask your wholesaler salesman for your FRAM D-46 Deal right away—and get your FREE C-4 Cartridges!

Win a **NEW** in FRAM GIANT
CAR

**\$110,000.00
CONTEST**

for dealers and wholesaler salesmen

PLUS 1,204 OTHER PRIZES!



20—1st PRIZES
\$1,000.00 SAVINGS BONDS



24—3rd PRIZES
21" PHILCO TV SETS



100—5th PRIZES
BLACK & DECKER
DRILL KITS



20—2nd PRIZES
BENDIX DUOMATIC WASHERS
AND DRYERS



40—4th PRIZES
8MM REVERE CINE CAMERAS

**HUNDREDS OF
ADDITIONAL
PRIZES!**



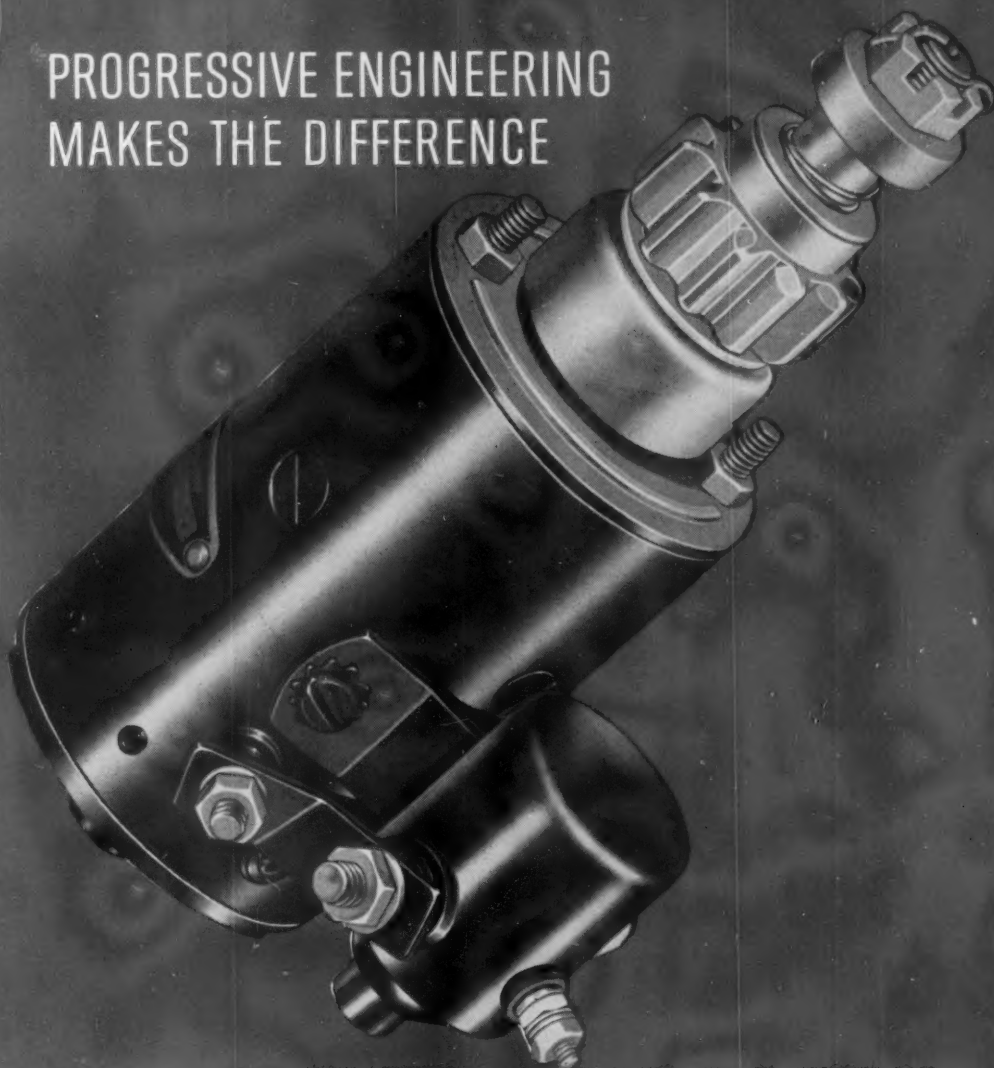
FRAM
OIL • AIR • FUEL • WATER
FILTERS

SEE YOUR WHOLESALE SALESMAN

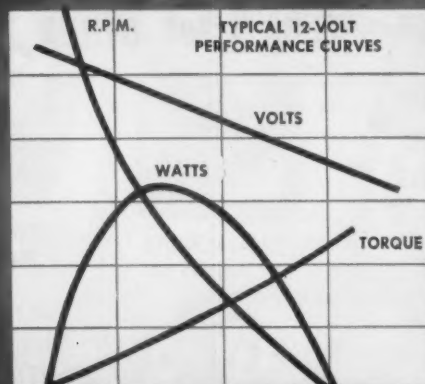
FRAM CORPORATION, Providence 16, R.I. Fram Canada Ltd., Stratford, Ont.

Chilton's MOTOR AGE, JANUARY, 1956

PROGRESSIVE ENGINEERING MAKES THE DIFFERENCE



TYPICAL SPECIFICATIONS	MODEL 1113501	MODEL 1113551
VOLTS	6	12
FRAME DIAMETER (INCHES)	3	3
FRAME LENGTH (INCHES)	4.30	4.42
MOUNTED LENGTH (INCHES)	5.25	5.37
APPROXIMATE WEIGHT (POUNDS)	6.5	6.5



DELCO-REMY DEVELOPS A NEW LINE OF CRANKING MOTORS FOR OUTBOARDS AND OTHER APPLICATIONS

A new series of Delco-Remy cranking motors, with many new design features, is now available for outboards, garden tractors, power mowers and other similar applications.

With a frame diameter of only 3 inches, an overall length of slightly over 5 inches when mounted, and a weight of about 6½ pounds, the powerful new motors will crank one-cylinder engines up to 15 H.P., two-cylinder engines up to 35 H.P., and four-cylinder engines of even higher horsepower.

These four-pole, four-field motors, designed for both 6-volt and 12-volt systems, may be powered by standard Delco batteries.

Available now for original equipment applications, the new motors can be supplied with or without automatic drives and solenoid switches to meet varying requirements. They are yet another example of Delco-Remy leadership in electrical equipment "Wherever Wheels Turn or Propellers Spin." Manufacturers of engines and power equipment are invited to write directly to Delco-Remy for complete information and engineering assistance on the application of these units.

DELCO-REMY • DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA



GENERAL MOTORS LEADS THE WAY STARTING WITH

Delco-Remy
ELECTRICAL SYSTEMS

Progress Report . . . Continued from Page 98

vania, a meeting was held at Williamsport with the local association there; members of IGO from Lancaster met with them, these two cities affiliated and began work toward a truly statewide association.

In Columbus, Ohio, at the State Capitol, the Secretary of State, Mr. Ted Brown, presented the

charter to Mr. Frank Hornyak, President of the new state association, IGO-Ohio. This joined together Toledo, Canton and Youngstown.

In October, 1955, IGO-Tennessee federated with IGOA and the Allied Membership had expanded to twenty.

In the past seven months, Na-

tional Headquarters has sent out more than three thousand letters for the promotion of IGOA. The amount of correspondence grows daily. We now have garage operators as members in fifteen states and have twenty Allied Members. Also we have created a great amount of interest in many other cities concerning our organization.

Cordial Invitation

We intend to keep growing and for those in this field we extend a most cordial invitation to join. Write us at National Headquarters, whose address again is 3614 East 40th Street, Tulsa, Okla.

Anderson Awarded Achievement Medal

Joseph A. Anderson, general manager, AC Spark Plug Division of General Motors, was awarded the "Outstanding Achievement Medal" of the University of Minnesota on Dec. 9, the university has announced.


University President J. L. Morrill said the award has been made to Anderson by the board of regents upon the unanimous recommendation of the Faculty Committee on Honors and the Administrative Committee of the Senate.

The award, Morrill noted, "is reserved for former students of the institution who have attained high eminence and distinction."

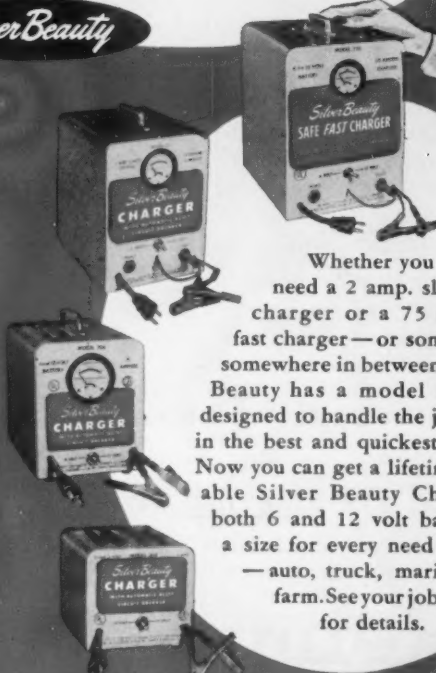
YES!

There's a Double-Duty
(6 and 12 volt)

Silver Beauty made for you



Silver Beauty




Whether you need a 2 amp. slow charger or a 75 amp. fast charger—or something somewhere in between—Silver Beauty has a model specially designed to handle the job for you in the best and quickest way. Yes! Now you can get a lifetime-dependable Silver Beauty Charger for both 6 and 12 volt batteries in a size for every need and use — auto, truck, marine, or farm. See your jobber for details.

UL

SP

WRITE FOR FREE CATALOG

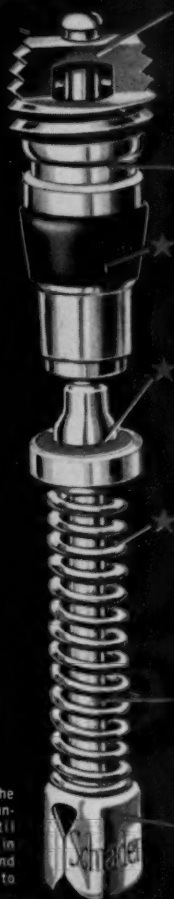


TRIPLE A SPECIALTY COMPANY • CHICAGO 12, ILL.

Answers to Motor Age Shop Clinic Quiz on page 67.

1. Right
2. 20 to 25
3. 30 minutes
4. One complete revolution (four quarter turns)
5. .018
6. Right bank
7. True
8. False
9. True
10. False (finger-tighten before testing to seat the gasket)

Schrader
4000
Valve Core



STURDIEST BRIDGE resists damage from screwdriver tools when tightening or removing.

STRONGEST SWIVEL JOINT—will not separate when removing core.

IMPROVED PLUG GASKET—now withstands both extreme heat and cold. Wedge fit, will not distort.

SUPER SEALING SEAT—seals under higher tension—sure airtightness—finest heat and oil resisting rubber for longest service life.

NEW HIGHER TENSION* Stainless Steel SPRING—improves sealing—unaffected by heat. Spring-at-the-bottom provides obstruction-free air passage thru the top of the core.

FULL LENGTH PLUNGER PIN—guided top and bottom. Greatest travel insures easy inflation.

SPRING CUP—specially designed to align, anchor, make removal easiest.

*On long cores, the spring is never under tension until core is inserted in the valve. Then—and only then, it goes to work!

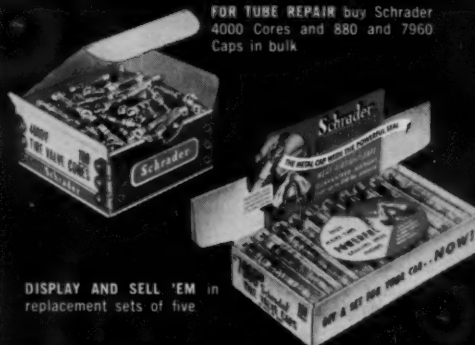
Rugged brass shell houses the sealing unit and locks it on to the valve mouth.



Schrader
880
Valve Cap

Tough specially compounded rubber, molded between two brass plates—makes a powerful seal over valve mouth.

FOR TUBE REPAIR buy Schrader 4000 Cores and 880 and 7960 Caps in bulk



DISPLAY AND SELL 'EM in replacement sets of five

How Schrader Valve Caps and Cores keep your customers sold on you

Smart servicemen know that customers prefer a dealer who shows he's really interested in keeping their cars in the safest, finest condition. A good way to start is with the little things like checking cores and caps with an eye on his tires.

Always suggest replacing leaking cores and missing caps with a quality Schrader set to restore the tires to their *original airtightness*. This means safer, longer-lasting tires for the customer at the lowest possible expense. And the interest you've shown builds the kind of confidence that makes your customers come back to you for future needs... and all your profit-making services.

Remember, always protect your services... and your customers... by using genuine Schrader Certified Air Service Products—they're the finest you can buy. Order them from your supplier today!

NEW SAFETY SEALING

TIRE VALVE CAPS

THEY HAVE THIS **POWERFUL SEALING UNIT** INSIDE

NEW!

7960 Valve Caps in plastic packages. Show 'em... Sell 'em all your services. In plastic containers of five each—packed 100 Caps to a carton with display badge.

Schrader

REG. U. S. PAT. OFF.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
470 Vanderbilt Avenue, Brooklyn 38, N. Y.

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

1965 Expectations . . . Continued from Page 64

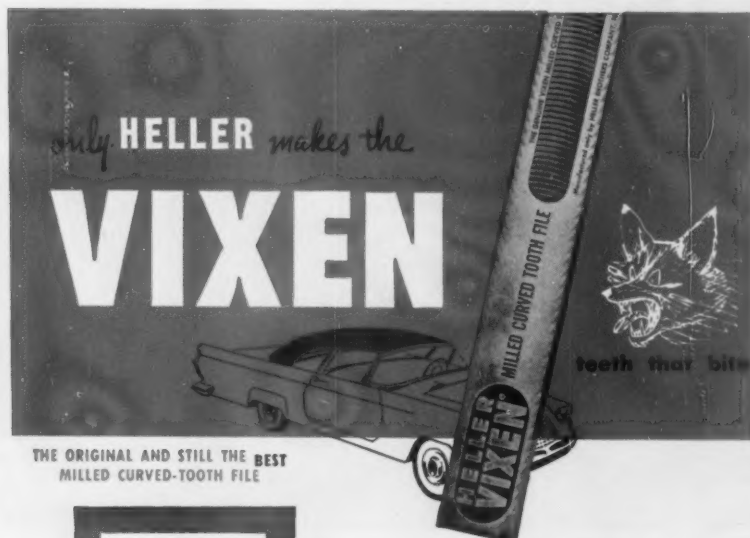
improvements that will do the same job cheaper, or a better job at the same cost, or more jobs at a reasonable saving. Functionally, efficiency comes first and then the other qualities.

But the automobile market is not the end of our prospects for 1965. The aviation industry has tremendous prospects for 1965. The re-

cent announcement of the arrival of the commercial jet age in the U. S. is but a hint of the scope of aviation. Air traffic will probably triple in the next decade. The use of helicopters is expected to be widespread as the little "whirly birds" proved their versatility in the Korean War. As you well know, the aviation field has special

requirements for both your product and mine. There is little indication that this specialization will be abandoned — the nature of the use dictates that. But the phenomenal growth of the aviation field and the rapidity of its innovations suggests that we both had better keep our eyes opened for opportunities to make improvements in our existing products.

The agricultural field offers continued prospects for our businesses. In 1965 it is estimated that only 5½ million persons will be employed in agriculture. This is about a million fewer persons than today. Yet, the output per man-hour is expected to increase over 40%. The key to this efficiency is mechanization, of course. And with mechanization comes the demand for your products and mine. There will undoubtedly be an increase in fuel dispensing equipment on the farms. In fact, junior grade bulk plants will probably be



THE ORIGINAL AND STILL THE BEST
MILLED CURVED-TOOTH FILE



VIXEN HALF ROUND SHELL FILES,
designed for use on concave surfaces,
with teeth on the convex side only.
Wooden holder or steel back available.

VIXEN WHIZCUT, with long serpentine grooves, eliminates clogging,
gives smooth finish without chattering or skidding.

VIXEN FLEXIBLE FILES, for all auto body and sheet metal work, used with holder. Teeth both sides for filing flat, outward or inward, giving smooth, scratch-free finish.



HELLER TOOL CO.

A Subsidiary of Simonds Saw and Steel Co.

Newcomerstown, Ohio—Branch Offices in New York, Detroit, Chicago, Los Angeles



recognized more and more among the structures on the farms of the future.

Marine Market

Another field that has been perhaps overlooked by some of us is the marine market. Not so much the ocean liners — but rather the hundreds of thousands of small boats that dot the shorelines and lakefronts of the nation.

Some twenty million people took part in boating to one degree or another last year, and the 1965 (Continued on page 108)

MONROE'S TUNE UP THE RIDE CAMPAIGN

Start today—Cash in on public demand
for smoother, safer rides...

INSTALL MONRO-MATIC SHOCK ABSORBERS

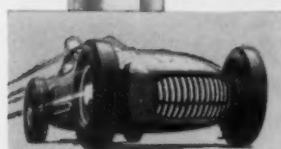


Shock sales can double the profits of your hoist. Every time you have a customer's car on the hoist, be sure to check the shocks. An oil-stained shock is a worn, inefficient shock that should be replaced.

Car owners everywhere are demanding smoother, safer riding. Monroe Dealers can cash in on this demand with Monroe's TUNE UP THE RIDE campaign.

Two out of five cars on the road today need shock absorbers replaced. You make up to Fifteen Dollars profit when you replace worn shocks with a set of Monro-Matics—and you build customer goodwill too.

So, start today to ring up those big, easy profits. See your jobber, or write us for full details on Monroe's TUNE UP THE RIDE Campaign.



3-Year Winner of "500"
Monro-Matic Shock Absorbers dramatically prove their worth under the most trying conditions. Winner of first place at Indianapolis Speedway for three years straight, Monro-Matic-equipped cars took first, second and third in the 1955 "500."



National Advertising
Monroe backs dealer's selling efforts with a hard-hitting national advertising campaign, that builds name recognition, product acceptance for Monro-Matic Shock Absorbers. Radio commercials and newspaper mats are furnished free for local use.



Sales Helps, Include display cartons, ride tune-up kit, window and wall posters, wheel cards, mailing cards. Fleet of salesmen's cars carry Monro-Matic message to millions on the highways.

30-DAY FREE RIDE PLAN

Get the facts on the industry's most sensational sales-producing plan. Dealers report sales and profits upped as much as 500% by the Monroe 30-day Free Ride Plan.

FREE!

You are invited to a Free showing of "Behind the Scenes at Indianapolis." Ask your jobber for date of showing.

MONROE AUTO EQUIPMENT COMPANY

MONROE, MICHIGAN

World's Largest Maker of Ride Control Products



This is Edwin Fisher. It's been just over a year since he first opened his Grosse Pointe Packard showroom. Here, in his own words, he tells some of the unusual rewards he has enjoyed as an independent businessman selling

Packard and Clipper cars. The facts behind them are of vital interest to every present-day automobile dealer who is naturally concerned with how he can make a living and do some living at the same time.



"I set the quotas. And they are reasonable and realistic, based on my Packard and Clipper potential of my area each month. As a result, I can be sure of *good profit* on a number of new car sales that makes some competitors' *break-even minimums* gigantic by comparison!"



"Just two cars in America have Packard craftsmanship, and I sell them both—Packard with its top 310 hp., and Clipper with its top 275 hp. And each has features other dealers won't have for years."

"I have the Market . . .
I have the Cars . . .
I set My Own Pace . . .
**THAT'S WHY
I BECAME A
PACKARD DEALER!"**

says Edwin Fisher
of Grosse Pointe, Michigan



"I don't get surprise visits from the man in the haul-away. He brings only cars I've ordered. When I think 'volume viewpoint,' I think in terms of 4, 6 or 8 extra cars a month—not 20 or 30—to boost volume."



"I move in the top segment of the community . . . meeting important people . . . as part of my job selling new Packards and Clippers. Best of all, I have time to enjoy the good living I make, while I'm making it!"

LIKE TO SELL CARS? Like to make money doing it? Like to set a reasonable pace . . . even in today's tough market?

Then talk to Edwin Fisher who, after 20 years in the automobile business, switched a year ago to the Packard and Clipper franchises. What he says about the Packard way of selling may well ring a bell with you, too.

For example, "The Packard and Clipper markets, and Packard and Clipper selling," he'll tell you, "make more sense than anything I've seen."

"Look at the markets. Each car sells to the finest families in its field . . . the cream of the income brackets in the luxury and the medium-price classes. I deal with the top 3% to 5%, so I pick my prospects. I target my efforts, my advertising and promotion. I don't get into the bedlam of wheeling and dealing!"

"As a result I can concentrate on selling just about a third to a half the number of cars per month that many other dealers have to sell every week. And even more important I make money on my volume. I don't just end up trading dollars!"

"And, have I got the two cars to demonstrate and

sell! I can run circles around my competition. Against any car at any price on any road, my Packards and Clippers practically sell themselves.

"I've got the style, the prestige, the features and exclusives. Just count them—highest horsepower in the luxury or medium-price field . . . Electronic Push-Button Control with the finest of all automatic transmissions, Ultramatic . . . plus the only rear axle ratio that gives overdrive economy with an automatic transmission. And famous Torsion-Level Ride!"

"All the way, my first year with Packard has brought good profits at a reasonable pace. I look forward to an even better year ahead!"

All over this country Packard dealers look forward to '56 with the same optimism for their segment of the business which becomes more important every day. They—like Packard—believe a dealer is entitled to make a living and do some living at the same time. If you share this view, why not get complete information on the new Packard and Clipper franchises. Write or contact the Packard-Clipper Division or the Zone Office nearest you (see below). This could mark the beginning of a great new year for you.

Wherever you find the Packard name you find

A New Era in Dealer-Factory Relations

PACKARD-CLIPPER DIVISION • STUDEBAKER-PACKARD CORPORATION • DETROIT 32, MICHIGAN

Where Pride of Workmanship Still Comes First

ATLANTA—370 Peachtree, N. E.; BOSTON—20 Webster Place, Brookline; BUFFALO—1226 Rand Bldg.; CHICAGO—1640 N. La Salle; CINCINNATI—2336 Iowa; DALLAS—1922 Cedar Springs; DENVER—1147 Broadway; DETROIT—574 E. Jefferson; KANSAS CITY—2735 Main; LOS ANGELES—1000 S. Hope; MEMPHIS—830 S. Bellevue; MINNEAPOLIS—333 W. 78th; NEW YORK CITY—1861 Broadway; PHILADELPHIA—1237 N. Broad; PHOENIX—400 W. Washington; PITTSBURGH—5560 Centre; RENO—300 S. Virginia; ST. LOUIS—2311 Hampton; SALT LAKE CITY—345 S. 2nd, East; SAN FRANCISCO—901 Van Ness; SEATTLE—1907 7th; SPOKANE—330 S. Howard; WASHINGTON, D.C.—1242 24th, N.W.

1965 Expectations . . . Continued from Page 104

prospects of a consumer with money in his pocket and added leisure time in which to enjoy himself indicates that the four million outboard motors in operation last year will multiply vastly by 1965. We can expect the number of marine service stations to increase, also, and again, you and I stand to gain.

The 1965 outlook for the construction industry goes hand in hand with the population increase. There is at this time a considerable backlog of public construction—federal, state and local. Between now and 1965 this backlog will probably be worked off but total expenditures for public construction in 1965 will increase about

70% over the present. Four billion dollars will go for schools, about 6 billion for highways and 7 billion for all the rest.

A 3 to 4 billion dollar increase in residential non-farm construction by private interests will probably be adequate to accommodate the 1965 requirements and business expenditures for plant and equipment will amount to something like \$60 billion in 1965.

Opportunity Prevails

This much construction activity indicates another opportunity for you and me. Construction's use of motor fuel is one of the major off-highway uses and is a market of generous proportions. The larger the construction job, the more mechanization and fuel requirements, and the more reliance on at-the-site fuel dispensing equipment.

All in all, it seems that we have quite a bit to look forward to in 1965, but there is one caution that must be constantly referred to. You and I won't enjoy the business prospects of 1965 using the same products and techniques that we are using now.

The stream of new materials, new final products and new methods and processes that flow from scientific progress and applied technology is one of the fundamental growth factors of our economy. We can expect to bump against it constantly throughout the next decade.

If we refuse to contribute to it we shall be left behind, if we refuse to accept it as a market factor we shall be left behind. Our only alternative is to take it into the business as both a problem and a solution to success.

Thor Prize Contest

A \$1000 capital prize has been awarded by Thor Power Tool Company as part of an air tool "noise abatement" program centered on a new acoustical muffler developed by the company for small air screw-driver and nut-setters.

In an industry-wide contest, the \$1000 prize was divided among 26 winning entrants who submitted the descriptive name "Silentair" for the new muffler and the line of air tools on which it will be used.

Safer by a Long Sight...

GROTE CLASS 'A' DIRECTIONAL SIGNAL LAMPS

All Grote Directional Signal Lamps are approved as *Class A, Type I*, where required. Specially designed plastic 4" lens will not fade or distort... lens shines extra bright regardless of mounting position. Baked black enameled body is heavy gauge rust-proofed steel. Stainless steel door with snug gasket seals out dust, moisture. Single screw fastening on door for easy bulb replacement. Available in 14 complete signal set combinations with manual or self-cancelling switches.

Insist on GROTE Lamps.
See your Jobber today, or write for catalog and prices.



No. 404
Double face, amber and red. Lamp Body designed to eliminate daylight glare. 21 c.p. single bulb. Pedestal mount.

No. 401
Single face, pedestal mount.

No. 402
Single face, semi-flush, stud mount.

No. 406
Single face, flush mount.



Lamps • Directional Signals • Reflectors • Flares • Mirrors

Distributed throughout the U. S. and Canada

THE GROTE MANUFACTURING CO., INC., Bellevue, Ky. • Opposite Cincinnati

DEMAND AUSCO

...Speed Servicing with the
Finest, Safest Jacks Made!



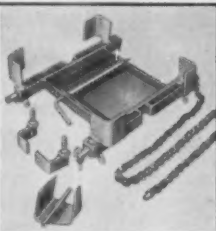
TOUGH,
SAFE,
DEPENDABLE JACKS!

Hydraulic Transmission Handlers!

New Ausco Floor and Pedestal model Hydraulic Transmission Handlers are rugged, dependable and easy to use! Each has Ausco's Universal Adapter for fast, safe transmission handling!

UNIVERSAL ADAPTER...

- ✓ Fits all automatic transmissions, including Powerglide '53 and later.
- ✓ Adjusts 5½"–15" Width, 7¼"–15" Length.
- ✓ Holding clamps cradle pan of transmission. Flange of transmission rides on edges of clamps.
- ✓ Needs no tools for adjustment.
- ✓ Has convenient Safety Chain.



Look Over these new Ausco Jacks. Check their features against your needs—then Call Your Ausco Jobber for a demonstration. For jacks to speed every automotive service job, demand the finest, AUSCO!

HYDRAULIC TRANSMISSION HANDLERS

Floor Model D-6500

- Handles any transmission to 500 lbs. Capacity 1000 lbs. 3-ton replaceable power unit.
- Lifts from low 5¼" to 24½".
- 4 caster wheels assure easy handling.
- Controlled or floating tilt—56° forward, 6° back.
- Controlled side tilt—10° left or right.
- Pump handle mountable both sides for left or right hand operation.
- 2¼" ground clearance.
- Handy release.
- Handy tool trays.
- Weight 95 lbs.

Pedestal Model D-6600

- Handles any transmission to 500 lbs. 1000 lb. capacity.
- Lifts from 32" to 72".
- Two stage pump, two speed foot release.
- Drops to bench or fixture level.
- Tripod base straddles lift floor plates easily, caster wheels speed positioning.
- Controlled tilt—28° forward, 10° back, 13° right or left. Slides laterally 3' on steel rollers.
- Pump in handle for ease of operation under lift. Dolly-ing handle.
- Safety overload valve.



AUTO SPECIALTIES MFG. CO., INC. Saint Joseph, Michigan. Other Plants in Benton Harbor and Hartford, Michigan and Windsor, Ont., Canada.

AUSCO manufactures quality jacks for every automotive need... service facilities are available in your locality!



Passenger Car Jacks
Bipod,
"Y-Bar" Ratchet,
Frame Models



Garage
Horse
2 and
5 tons

Hydraulic Jack Oil
Pints, Quarts,
Gallons



One-End
Lifts
Hyd. & Mech.



Hydraulic
Axle Jacks
Std. and
Hi-Range



Hydraulic
Service Jacks
1¼, 1½, 2, 4
and 10 tons



IGO OF OHIO: At state capitol in Columbus, Ohio State Secretary Ted W. Brown (center with bow tie) presents state incorporation Charter for Independent Garage Owners of Ohio to Frank Hornyak, association president. IGO of Ohio officials from left to right: Oliver Rideout, Ralph James (IGO of America exec. director), James Hanlon, Walter Winkler, George Milligan, William Good, Brown, Frank Smith, Paul Wilson, Hornyak, Irving Susor, H. Grindle.

'Inter-Industry' Names H. Holmes

The appointment of Harold Holmes as midwestern regional representative of the Inter-Industry Highway Safety Committee was announced recently by M. R. Darlington, Jr., managing director.

"Holmes assumes his new post immediately and will assist state and local dealer highway and safety chairmen, their committees and associations as part of the Inter-Industry Highway Safety Committee's field service work," Darlington said. "Early in 1956 the Committee's field representatives will begin working with communities and dealers planning to participate in the annual National Vehicle Safety-Check for Communities during the month of May. Field services, under the direction of Francis P. Lowrey, also cover activities relating to the Committee's continuing program for 'Better Highways—Better Drivers.'"

Holmes' region will include the states of North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana, Ohio.



champ clamp

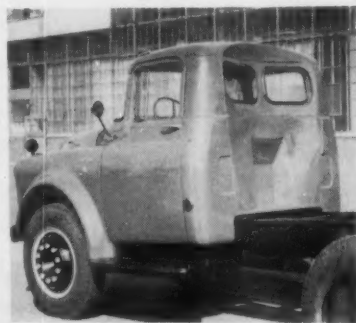
is what they call
AERO-SEAL Hose Clamps! The new quick-attach JET or REGULAR win all bouts with vibration, corrosion or competition. These smooth, wide, stainless steel bands never pinch or damage hose. The precision worm gear tightens with even pressure all around. You get a tight seal that stays put—won't snap open until you want to remove it. And it's re-usable over and over. Widest range of sizes for cars, trucks, tractors and industrial uses.

Insist on genuine AERO-SEALS for complete satisfaction, bigger profits, happy customers. Ask your jobber.

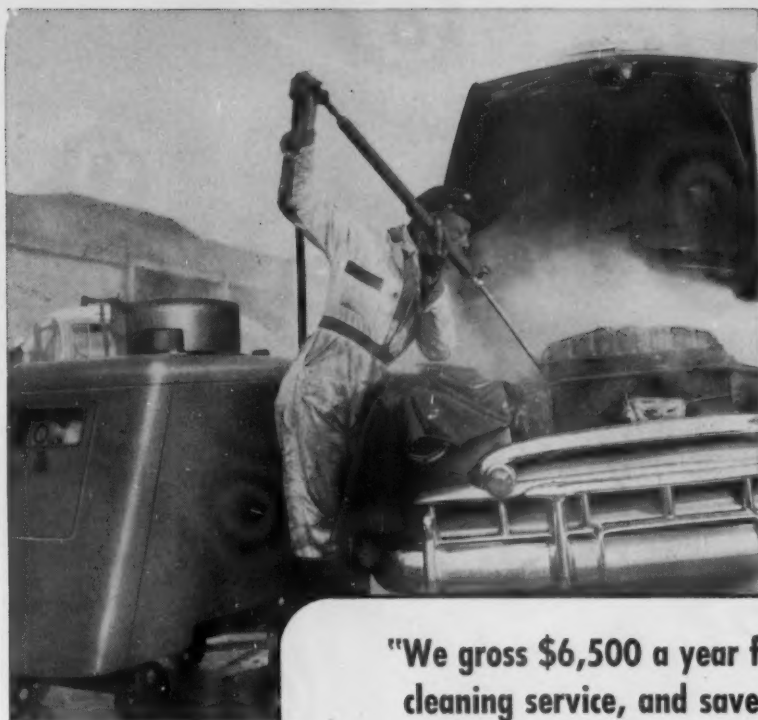


and **AERO-SEAL REGULAR WORM GEAR HOSE CLAMPS**

BREEZE CORPORATIONS, INC., 700 LIBERTY AVE., UNION, N. J.



NEW CONTOURED Dodge truck cab provides a dimension of only 96 inches from the front bumper to the center of the back of the cab to permit the use of longer trailers while keeping within legal length limits.



"We gross \$6,500 a year from customer steam cleaning service, and save around \$16,500 on approximately 3,000 major repair jobs a year with our Hypressure Jenny Steam Cleaner..."



states
MR. GEORGE W. MORRIS
Service Manager
Gateway Chevrolet Co.
Daly City, California

Gateway is one of the Bay area's outstanding new car dealers. In their modern service shop they do an estimated 3,000 major repair jobs a year. By using Hypressure Jenny to clean before repairs, and for parts cleaning, this progressive company saves an average of one hour on each job. At \$5.50 an hour this amounts to an amazing saving of \$16,500 a year in shop overhead alone.

Since steam cleaning for customers is not their principal

business, Mr. Morris states that Gateway does not advertise the service, but provides it only at the customer's request. Nevertheless, approximately 120 customer jobs a month are performed, averaging \$4.50 each which gross Gateway \$6,480 a year in additional unsolicited revenue.

However you use it—as a shop tool or to provide a much needed customer service, Hypressure Jenny Steam Cleaner will produce more profit per square foot of floor space than any other piece of automotive equipment you'll ever own.

The coupon below will bring you full particulars. Why not mail it today! You'll be glad you did.

HYPRESSURE

Jenny

**STEAM
CLEANER**

*Mail this
coupon TODAY...*

HYPRESSURE JENNY

Division of

HOMESTEAD VALVE MANUFACTURING COMPANY

P. O. BOX 95

"Serving Since 1892"

CORAOPOLIS, PA.

Without obligation send me full particulars on:

☐ Hypressure JENNY.

☐ Jobber time-payment plan.

Name _____ Title _____

Company _____

Address _____

City _____ State _____

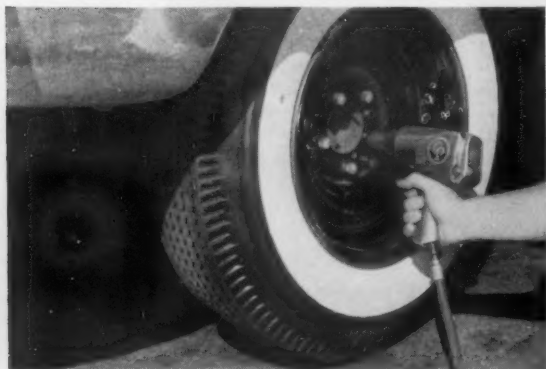
A

Annou

the *New* CP TORK-MASTER **AIR IMPACT WRENCH**

... at the price of an Electric!

That's right! For only \$127.50 you can own a new CP Tork-Master ... the Impact Wrench with the VARI-TORK clutch that cuts nut running and removal time 75% ... greatly increases billable output. The compact Tork-Master has built-in *fingertip control* ... you can run a series of nuts and bolts to precise and uniform tightness ... twist the control knob to cut power down for small nuts or turn it to full slugging power for knocking frozen nuts loose. *Chicago Pneumatic Tool Company, 8 East 44th Street, New York 17, N. Y.*



CP Tork-Master with the VARI-TORK Impact Clutch has built-in fingertip control for setting bolts to proper tightness.



The new CP Tork-Master is available with Attachable Angle Heads for getting into tight spots.



Chicago Pneumatic

AIR AND ELECTRIC IMPACT WRENCHES • BEAD BREAKERS
PNEU-DRAULIC TRUCK JACKS AND PUMPS • ZIP GUNS

ncing...



CP-732 TORK-MASTER 1/2" square drive

**Only CP Tork-Master has these
AIR WRENCH advantages
at electric wrench price:**

- VARI-TORK Impact clutch
- Built-in fingertip control
- Safe from shock and fire
- Lighter, more compact, easy-to-handle
- Faster, more powerful
- Cooler running, faster starting
- Less working parts to maintain
- Longer trouble-free life
- Minimizes pilferage problem

Chicago Pneumatic Tool Company, Dept. A-4
8 East 44th Street, New York 17, N. Y.

☐ Please arrange demonstration. No obligation of course!

☐ Please send me FREE Tork-Master literature.

Name

Company

Address

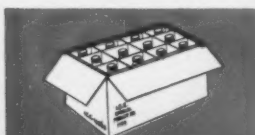
City Zone State

CORNWELL Electrolyte



For Dry Charged Batteries

MEETS ALL BATTERY SPECIFICATIONS



12 Disposable 1 Qt.
Glass Bottles Packed in
Reinforced I. C. C.
Approved Carton

**GUARANTEED
AGAINST
BREAKAGE!**

Also Available in Special Export Wire-Bound Boxes of Four 12-Quart Cases Write Nearest Sales Office for Quotations. Dept.

Cornwell Chemical Corp.
Executive Offices: 24 East 38th St.,
New York 16, Murray Hill 3-0174
Sales Offices: Cornwells Heights, Pa.
(Philadelphia), Cornwells 0700 —
ORchard 3-2088; 744 Broad Street,
Newark, N. J., Market 4-2776

Two Toning . . .

Continued from Page 55

job. Preparation of the surface remains as the most time consuming phase of the painting operation. New cars offer good, smooth working surfaces with which to start. However, there is one important point to remember. When a car comes in from the factory it is given a showroom shine for display purposes. The silicone based waxes generally used, must be completely removed with solvent *before* any sanding is done. This is essential, because silicone particles would be ground into the original paint by the sand paper. Should silicones remain, subsequent coats of paint will crawl or crater will form in the fresh surface.

After the surface is thoroughly wiped down with solvent, wet sanding with No. 400 sand paper will prepare it sufficiently for a new coat of paint.

Shops have found that most colors, except maroons, can be covered without a primer coat or sealer. Application of both elements are necessary to prevent maroons from bleeding through the new finish.

In two-toning, a lot of time can be consumed with masking operations. Where there is enough volume to warrant them, tape-dispensers that handle several widths of tape, can cut masking time in half.

Although two-toning new cars seems to be just routine work to the body shop, it is well to remember that each job has helped create a sale and, in addition, it produces profits for the shop.

Classified Advertisements

FOR SALE—Wholesale and retail auto parts in fast growing unincorporated part of Los Angeles County. Established 29 years. At intersection of two busy boulevards, right in automobile row. Nationally known brands of auto parts. Complete machine shop. Approximately \$50,000.00. Selling because of eye trouble. Write Box #31 in care of MOTOR AGE.

Garage, 110x120 brick building, with living quarters and ten rental apartments. Real income from apartments plus all the repair work you want to do. Located in one of the very best towns in entire state of Idaho. Wonderful fishing, hunting and big game. Information and free pictures mailed, no obligation whatsoever on your part. This one you should investigate immediately. C-5339 Continental 804 Grand, Kansas City, Missouri.

Keep your floors
**FREE of SLIPPERY
OIL SPOTS**



with

Oil-Dri[®]
ABSORBENTS

the modern, economical oil
and grease absorbents that
keep your floors dry, clean
and safe, and reduce main-
tenance costs.

**WRITE TODAY FOR FREE
60-SECOND DEMONSTRATION**

Now Available!



Handy
**OIL-DRI
DISPENSER**

Located on spot
where needed.
Slot-type re-
lease automati-
cally delivers
absorbent to
floor of dispenser.
Easy to dis-
pense with
shovel — no
waste — saves
time — saves
money!

AVAILABLE AT YOUR WHOLESALE

Oil-Dri CORPORATION
OF AMERICA

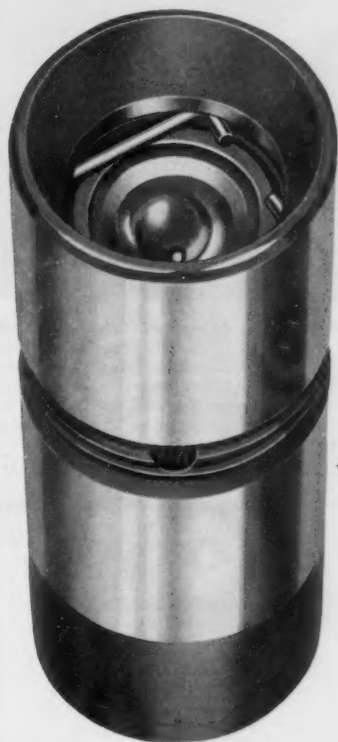
520 North Michigan Avenue
Chicago 11, Illinois

MORE CASH



from

"NO-LASH"



HYDRAULIC VALVE LIFTERS

**NOW—get the bulk of this big
replacement market with AC**

The big swing is to hydraulic valve lifters! Each year the proportion of new cars on the highways having them as original equipment is increasing! Over 8 million motorcars have from 12 to 16 hydraulic valve lifters in daily operation—an astounding total of 112,000,000 component parts!

And the big swing is to "No-Lash" Hydraulic Valve Lifters, for over half of the new cars have these GM-engineered lifters as original equipment—and the "No-Lash" line brackets 95% of the total replacement market. You can service nearly every car in your area with one brand of hydraulic lifters—"No-Lash" . . . the name that's known and accepted for quality and precision!

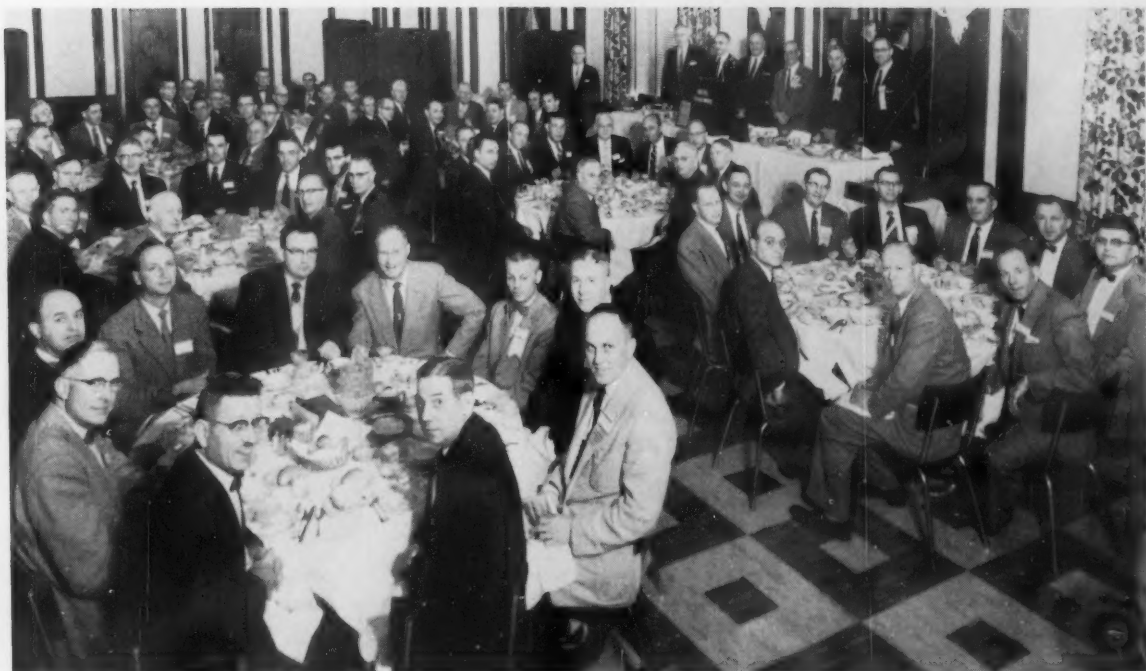
It's big and it's here . . . the replacement market in hydraulic valve lifters! So get set to cash in on it with the pre-sold "No-Lash" Hydraulic Valve Lifters—the advertised line that blankets the market!

AVAILABLE PROMPTLY
FROM YOUR REGULAR



SUPPLIER

DISTRIBUTED BY AC SPARK PLUG DIVISION, FLINT, MICH. • MANUFACTURED BY DIESEL EQUIPMENT DIVISION, GENERAL MOTORS CORPORATION



"THERE IS A SERIOUS SHORTAGE OF 100,000 automobile mechanics in this country today," state supervisors of trade and industrial education were told at a luncheon meeting last month at the Traymore Hotel in Atlantic City, N. J. Panel discussion on the problem was sponsored by the National Standard Parts Association in conjunction with the American Vocational Association convention. NSPA

executive vice president J. L. Wiggins was one of the main speakers at the meeting. Some 100 state supervisors attended the session. Here it was pointed out that studies were being made and steps taken to alleviate the mechanic shortage but that thousands more trained mechanics will be needed to meet the expected increase in the number of cars and trucks during the next several years.

NEW TIME SAVERS MONEY MAKERS

by **CHAMP-ITEMS**

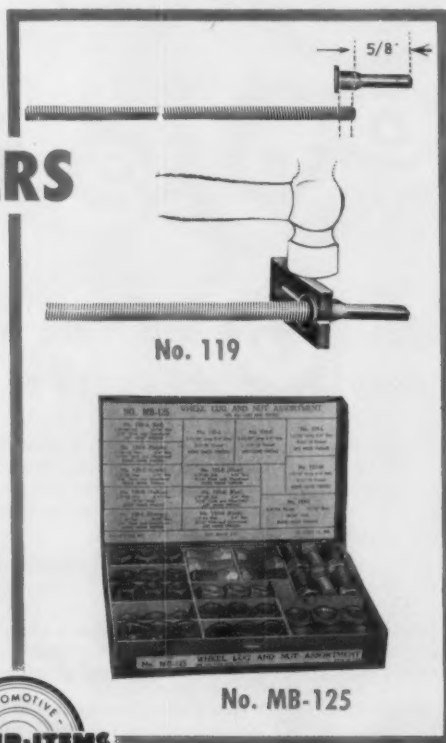


For the past 26 years Champ-Items has been supplying the automotive service trade with parts to solve tough service problems — make servicing easier and give the repairman a profit on those jobs. Here are some of the new items added to our line. We know you'll like 'em! Write for your copy of our new 1956 catalog — it's free.

No. 119 UNIVERSAL SPEEDOMETER CABLE KIT—Will fit almost all cars from 1937-55. Cable furnished with cutting, lubrication and assembly instructions. List \$1.40 each.

No. MB-125 WHEEL HUB BOLT AND NUT ASSORTMENT for all cars and small trucks. 78 pieces — 13 different types — 6 of each type. List \$10.50 per asst.

No. 127 BATTERY HOLD DOWN BOLT for Chevrolet 1934-55 — with wing nut and fibre washer. List 20¢ each.



CHAMP-ITEMS, INC.

6191 Maple Ave.

St. Louis 14, Mo.



ORDER FROM YOUR JOBBER

AMAZING

NEW LOW-COST TESTING DEVICE

for Pressurized Cooling Systems

**EDELMANN No. 92
COOLING SYSTEM
ANALYZER**

**YOUR
BEST
SALESMAN
for
PRESSURE
CAPS
and
COOLING
SYSTEM
SERVICE!**



**Instantly Reveals Leaks
and Faulty Pressure Caps
— Guards against Costly Anti-Freeze Loss!**

Make pressurized cooling systems your big *extra-profit* market this winter . . . with this scientifically designed 1-minute tester that sells parts and service. Show your customers *proof* of hidden leaks or damage that will waste costly anti-freeze . . . and watch your service sales grow.

ACCURATELY DETECTS leaks or pin-holes in radiator, cylinder heads, gaskets, water pumps, hoses, etc.

FITS ALL car radiators, all pressure caps—comes complete with special 2-way Rubber Bushing and 2-way Cap Adapter.

RUGGED, LIGHTWEIGHT, COMPACT, EASY TO USE—In handsome molded polyethylene case—unbreakable, non-marring.

AUTOMATIC PRESSURE RELIEF VALVE Guarantees Safety While Testing



E. EDELMANN & CO.

2332 LOGAN BLVD., CHICAGO 47, ILL.

One Stop Service . . . Continued from Page 53

the service salesman to stay with the customer and often adds up to additional sales.

Tom figures about a 25 per cent increase in sales through the use of this system. After the sale or sales is (are) made, the customer goes to the cashier's location in the office to pay his bill. Tom reports that rarely does a customer object

to getting out of his car to pay the bill. As a matter of fact this speeds up the operation as only one employee handles the money.

Good Shopkeeping

Good shopkeeping and good housekeeping are stressed at Aton's. The various work bays and the outside apron are kept neat

and attractive. And when a customer drives in, it is a standard rule his car be swept out with a whiskbroom and the windshield wiped clean regardless of the amount of sale.

Tourist Trade

The tourist trade amounts to a considerable segment of Tom's business. He estimates that about three out of four persons in this category stop again on their return trip along Highway 66 through Tulsa.

This point graphically points up the customer satisfaction and interest in Aton's "One Stop Service"!

Nine New Members Join NADA Board

Nine new members will officially join the Board of Directors of the National Automobile Dealers Association at the organization's 1956 Convention in Washington, D. C., January 28 through February 1.

They are John R. Fader, Fader Motor Co. (Ford), Newark, Del.; Charles B. Tutan, Tutan Motors, Inc. (Dodge-Plymouth), Miami, Fla.; John H. Lander, Lander Motors, Inc. (Dodge-Plymouth), Atlanta, Ga.; W. J. Cleveland, Cleveland Motors (Ford), Crowley, La.; Elvin L. Long, Al Long, Inc. (Ford), Detroit, Mich.; W. N. Neff, Nick Neff Tire and Motor Co. (Dodge-Plymouth), Fremont, Neb.; J. A. Hinote, Reno Motors (Lincoln-Mercury), Reno, Nev.; John M. Walker, Walker Chevrolet Co., Covington, Tenn., and William R. Bryden, Bryden Motors (Plymouth-DeSoto-International Trucks), Beloit, Wis.

Four additional dealers were elected to the NADA Board of Directors in 1955. Chosen by special election were Thomas A. Clarke, T. A. Clarke Motors, Inc. (Ford), Pawtucket, R. I.; Maurice J. Grant, State Motors (Lincoln-Mercury), Manchester, N. H.; Samuel Stowell, Stowell Corp. (Chevrolet), Rutland, Vt., and Leon E. Titus, Titus Motor Co. (Ford), Tacoma, Wash.

SAVE MONEY

UP TO
\$75 TRADE-IN ALLOWANCE
for your obsolete 6 Volt FAST CHARGER
on a new 6/12 Volt Unit



See our Distributor **TODAY**
8 Models to choose from
50 to 110 amps — all types
Price range \$79.50 to \$259.50



HEYER INDUSTRIES INCORPORATED
 BELLEVILLE, NEW JERSEY

WORLD'S LARGEST MANUFACTURER OF CHARGERS — ESTABLISHED 1923

Greatest advance in 4-door hardtops

THE BIG **M** *Phaeton*



Mercury introduces an all-new, truly different
4-door hardtop...unexcelled for style and smartness

Another example of Mercury's styling leadership! Now on display—in Mercury dealer showrooms throughout the country—is the newest advance in 4-door hardtops . . . the luxurious new Mercury Montclair Phaeton!

Along with its excitingly different low-silhouette styling, the Phaeton features better visibility . . . with extra-spacious viewing for rear seat passengers . . . and wide-wide doors for easy entrance and exit.

This glamorous, new BIG M Phaeton, a truly great advance in 4-door hardtops, is another big reason why *owners and dealers agree* "it pays to travel with Mercury."

FOR 1956—THE BIG MOVE IS TO
THE BIG MERCURY

A Magnificent Value in the Ford Family of Fine Cars

MERCURY DIVISION—FORD MOTOR COMPANY

6200 West Warren Avenue • Detroit 32, Michigan

Management Clinic . . Continued from Page 65

the man is good enough to be given supervisory functions he should be relied upon to complete the job without questioning. Do you agree or disagree with KY's technique? Why?

Of the 98 answers, 8 were graded excellent, 29 good and 38 passing. Twenty-three groups turned in wrong or unsatisfactory

answers. Some of the reasons considered correct and incorrect are:


Correct: 1. Definite follow up standards should be adopted through all department supervisory posts. 2. Supervisor delegates authority and not responsibility. 3. Possible that instruction may be partly disregarded or original instructions misunderstood.

Incorrect: 1. Delegation of responsibility is one of the functions of good management. 2. Indicates confidence in and cooperation of staff, and that he is an efficient manager.

When 23 supervisory groups out of 98 turn in the wrong answer to such a simple problem, could it not be reasonable to conclude that something was basically wrong in their thinking? Certainly their understanding of the role of follow up as a management tool and its importance in their own jobs was all cock-eyed. If 23 out of 98 individual supervisors had been at fault, the supervisory situation in that company would not have been so ominous.


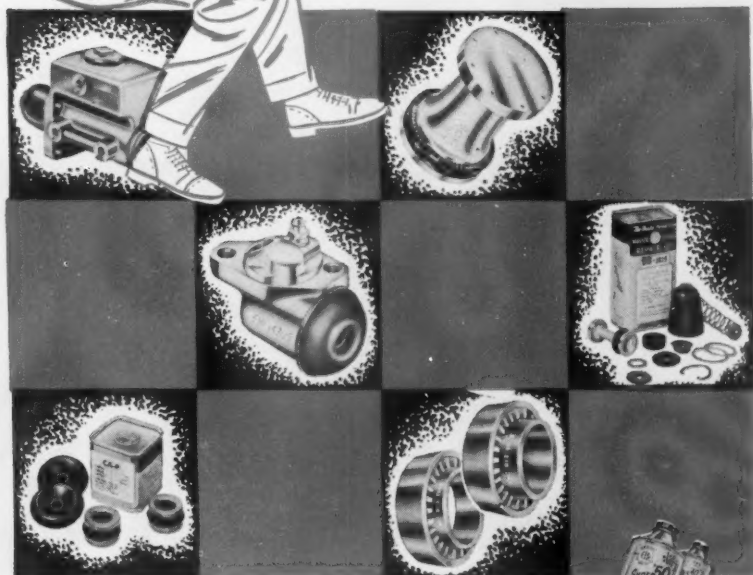
Perhaps, however, you think I am quite wrong in holding that follow up is so important in the

GET GOING WITH



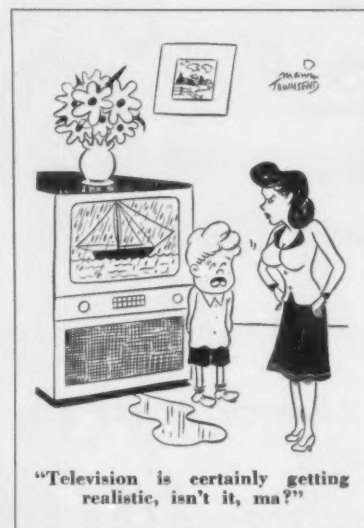
because EIS SAVES TIME ... SAVES MONEY!

STUMPED?

**BETTER MADE BETTER BRAKES BETTER SERVICE
BETTER PACKED BETTER CATALOGUED
AND FOR A BETTER PROFIT... MAKE YOUR NEXT MOVE**

Write for Catalog EIS AUTOMOTIVE CORP., MIDDLETOWN, CONN.



supervisory job. Let us then get down to brass tacks and examine the duties of the supervisor which demand follow up to insure effective performance. Does not adequate follow up spell the difference between top-flight performance and mediocre performance in the following supervisory activities:

1. Introducing, training, and developing the new employee.
2. Evaluating and strengthening individual employees.
3. Investigating complaints and infractions and determining employee reaction.

(Continued on page 122)

**There's an IMPORTANT
REASON WHY-**

HOLMES
IS the WORLD'S
Most Widely USED
WRECKER



HOLMES 525 MODEL

An all-purpose unit. Handles all cars, average truck and wide variety of work. Rated capacity 6 ton per boom.

There IS an important REASON WHY more shops use HOLMES WRECKERS than any other type of road service equipment. The Holmes Wrecker is widely accepted throughout the automotive world, because of its high degree of working efficiency. Its adaptability to work. Its ability to handle jobs on *any* terrain and under *every* possible working condition. Its flexibility of operation and other exclusive HOLMES features which assure fast, safe and economical service on the most difficult recovery or towing job. There are in fact many REASONS WHY—shops prefer Holmes Wreckers, but

the most important of these . . . is HOLMES all-around *earning capacity*.

The handling of "road calls" is a highly profitable operation which today calls for the BEST of SERVICE. To meet these exacting requirements, Holmes provides a wide range of 6 streamlined wrecker units, each of different size and capacity. All Tried, Tested and Proved according to the Holmes standard of performance. See your jobber or write today for model specifications, prices and details.



HOLMES Double Swinging Booms

The Double Boom principle of Wrecker construction originated by Holmes is the KEY to many operations which makes Holmes the safest, most satisfactory wrecker yet developed for use on the highway.



HOLMES Tow-Lift

Tows from front or rear end of any model car or truck. Easy to hook-up. Furnished with V-Type spacing bar and leather covers for protection of bumper. Available in 2 sizes, for any type wrecker.



HOLMES Ad-Mor-Length Boom

Adjustable Boom Attachment permits standard Double Boom Wrecker to be used on numerous commercial jobs. Built in 8 ft. sections for assembly up to 38 ft. Capacity ranges from 1 to 10 tons depending upon height lifted.

ERNEST HOLMES COMPANY—Chattanooga, Tennessee

Management Clinic • • Continued from Page 120

4. Scheduling and completing inspection activities.

5. Planning each day's and each week's work and checking adherence to the plan.

6. Securing proper care and use of company's supplies and equipment.

7. Interpreting company regulations, procedures, and standards

of service and checking to see that all employees understand and adhere to them.

8. Plotting training needs by using sound methods of checking job performance.

9. Evaluating the effectiveness of training methods used.

10. Checking observance of safety rules and instructions.

11. Assisting in the preparation, use and observance of standards.

12. Checking departmental efficiency as related to budget variances.

13. Making sure employee suggestions are given due attention.

14. Coaching on the job to make sure the training has "taken," especially in the supervisory or other types of training involving human relations. (In many instances this activity is part of basic training methods.)

15. Constantly analyzing his own successes versus his failures in carrying out the various activities of his job.

It is without doubt possible to list more of the foreman's functions where true success depends upon adequate and constant follow

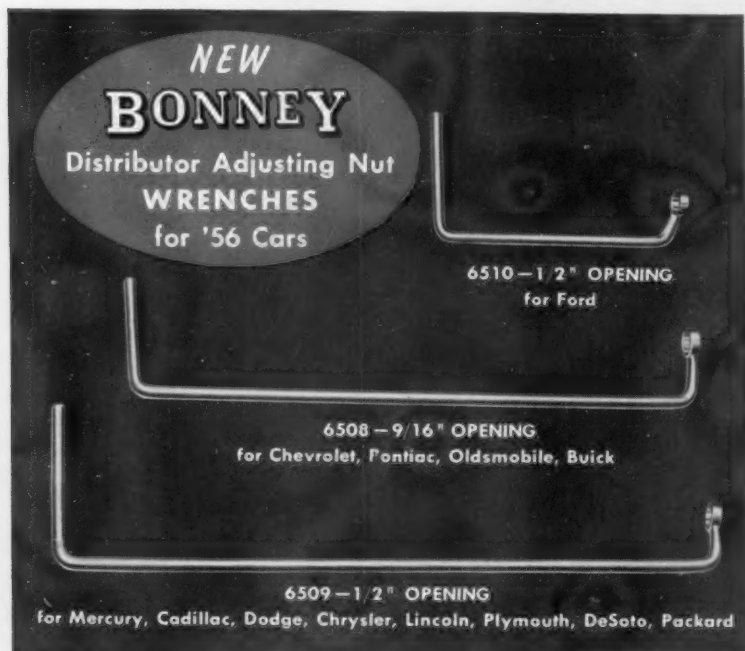
A high grade moron makes the best automobile driver. Don't be insulted. According to a Northwestern expert, tests show that more intelligent people have too many things, other than driving, on their minds. They usually make their driving errors while thinking of something else.

up. This list, however, is sufficient to convince me, at least, how important follow up is to the successful foreman.

But we cannot lay all the blame for ineffective follow up on the supervisor. Top management too frequently is at fault. Policies are often wrongly interpreted and poorly administered without top management knowing about it. Instructions are likewise not accurately followed out. Coordination between departments is lacking. Friction and bickering are a constant occurrence. But no machinery has been set up to detect and control such waste.

In another large company in the East management picked 185 subordinate executives and supervisors from the various departments and classifications to carry on an examination of the company's management policies and practices—much as an outside consulting firm would do. They were divided into seven sections and met three times per week for fourteen weeks. Various phases of management functioning were selected for

(Continued on page 126)



**Make it easy to reach
this "hard-to-adjust" nut
on all popular '56 cars**

In the '56 models, it's almost impossible to get at the distributor adjusting nut with standard tools. The nut is lost in a tangle of wires, carburetor, and other "in the way" parts. But now you can make quick work of this adjustment with these special new Bonney Wrenches. They have the proper bends and offsets to get around the obstacles. And like all other Bonney Tools, they're fine tools—precision built of high quality alloy steel... heat treated to rigid specifications... and chrome plated. You'll be needing them... you'll be wanting them. Why not get them now!

*Get them from your
Bonney jobber today!*



BONNEY FORCE & TOOL WORKS • ALLENTOWN • PENNSYLVANIA

Presenting...a new

PUROLATOR


MICRONIC OIL FILTER

Finest

... **Because of HOW IT'S MADE!** The New Purolator Micronic now has an aluminum laminate jacket—for sturdy, lasting sturdiness—for freedom from rust and acid-corrosion!

... **Because of WHAT IT TELLS!** The New Purolator Micronic carries the new PUROLATOR WARRANTY that tells the dealer at a glance what make and model each filter fits... assures the customer that, *whatever make of car he drives*, he is getting the filter engineered specifically for his car.

... **Because of HOW IT SELLS!** Purolator's "New Look" makes it the industry's finest, best-looking sales tool. The contrast between "clean" and "dirty" is accentuated—customers are sold on the spot. New Purolator oil filter displays will brighten all service outlets, attract customers—serve as a continual reminder to "Check and Change."

 **NASCAR Tested and Proved**
by 1000's of hours of driving
in late model cars.

For further information write, wire or phone your supplier.

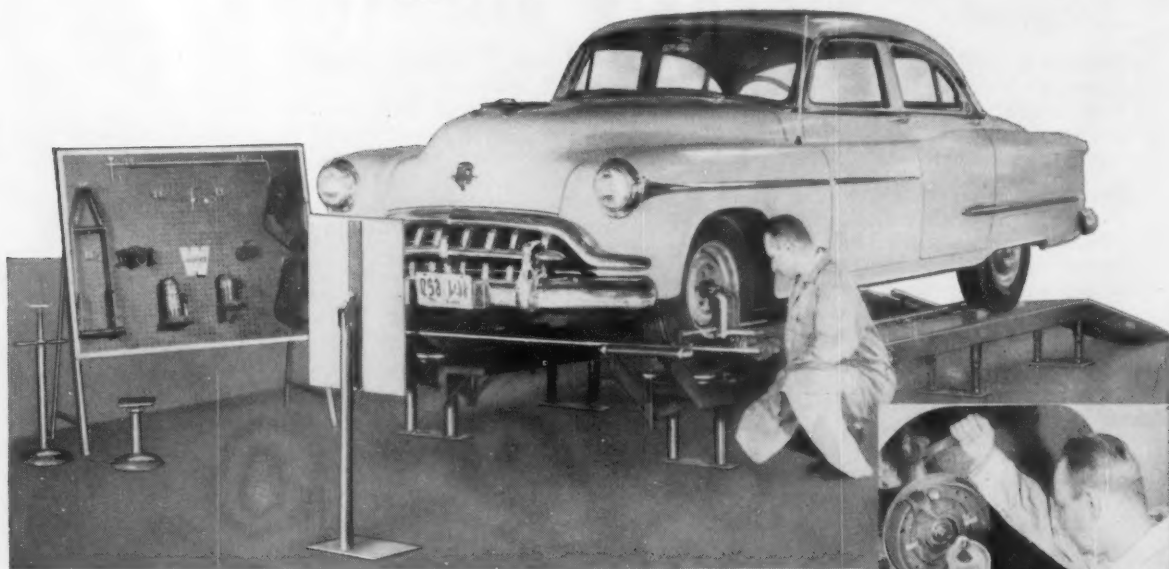
PUROLATOR PRODUCTS, INC., Rahway, New Jersey
and Toronto, Ontario, Canada

"Purolator" and "Micronic"
are Reg. U. S. Pat. Off.

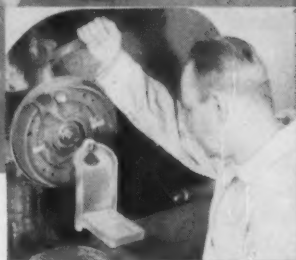
"The Jewel of the Industry"



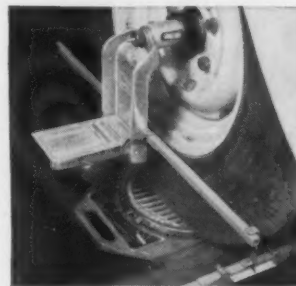
It's easy...and alignment service



The Weaver way wheel alignment system is the fastest and most accurate complete method for checking and correcting wheel alignment. It is endorsed by both automobile manufacturers and service shops



3-WAY GAUGE WJ-55. Checks king pin inclination and caster in one operation. Camber reading is automatic. All measurements are taken from spindle thus avoiding errors due to crooked wheels or rims.



TRU-WAY TOE GAUGE WJ-56 (Included with all Weaver Outfits and may be purchased separately). Accurately measures "toe" angle when used with a pair of spindle-mounted 3-Way Gauges.

WEAVER

profitable to sell the WEAVER way!

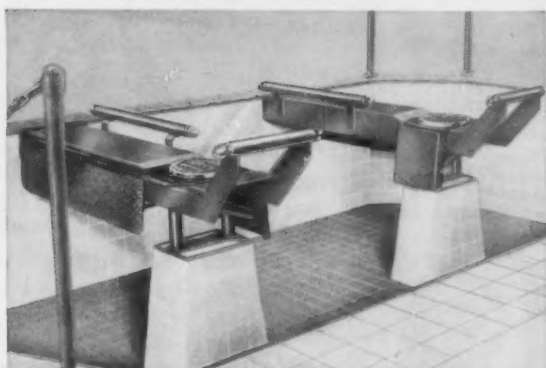
Don't pass up the big extra profits in wheel alignment! You can start modestly with a Weaver Outfit costing as little as \$340.00 or select from 3 other Weaver Outfits designed to answer every space and price requirement.

The simplicity of operation and unrivaled accuracy of the Weaver Way wheel alignment system will enable you to make more profit per job... avoid costly come-backs. Just 3 to 5 hours training are required to enable mechanics to handle wheel alignment on all passenger cars. The Weaver System quickly uncovers bent spindles... prevents unneces-

sary bending operations... assures thorough precision work.

The WJ-115 DeLuxe "Rack Type" Outfit shown on adjoining page contains all necessary tools for checking and correction of wheel alignment. It includes: 1 DeLuxe Alignment Rack, Two 3-Way Alignment Gauges, 2 Turning Radius Gauges, Tru-Way Toe Gauge, Portable Alignment Tester, 2 Front End Service Jacks, Knee-Action Camber Correction Outfit, "Peg Board Type" Tool Display Board, Jack Stand, Safety Lift Stand, Knee-Action Caliper, Drive-On Mirror, and Baked Enamel "Safety Service" Sign.

You can choose from 4 outfits
starting as low as \$340.⁰⁰



Model WJ-120 DeLuxe "Floor Level" Outfit contains same tools as the WJ-115 but is designed for use in floor recess in locations where floor space is limited.



Model WJ-125 "On-the-Floor" Outfit is the minimum "package" for complete checking of wheel alignment. Similar Model WJ-123 Outfit includes all items in WJ-125 plus Knee-Action Camber Correction Outfit.

SEE YOUR WEAVER JOBBER TODAY OR WRITE US FOR BULLETIN MA-486

WEAVER MANUFACTURING COMPANY, SPRINGFIELD, ILL., U.S.A.

SERVICE SHOP EQUIPMENT

Complete Weaver Line includes: Twin Post Lifts... Single Post Frame Type Lifts... Unit Lifts... Bumper Lift... Car Washers... Wheel Alignment Equipment... Headlight Testers... Brake Testers... Wheel Balancing Equipment... Jacks... Wheel Dollies... and Air Compressors.

Management Clinic . . Continued from Page 122

analysis. Each of these functions was analyzed independently by three committees and their reports were simultaneously presented to the various sections for study.

At the close of the regular sessions the various committee chairmen formed a committee to prepare a final report to management, which was approved by 80% of the

total group of the 185 participants.

One of the functions analyzed was "follow-up" and I would like to quote the section of the final report relating to that topic:

"Of the various practices of the Company which are most in need of improvement, 'follow-up' as a means for measuring the effectiveness and uniform application

of a program or policy stands at the top. To improve this situation it is recommended that an advisory follow-up agency be established. This follow-up agency should be comprised of an executive from each of the following departments:

Office of the President (Permanent Chairman)
Administration or Sales
Engineering
Inspection
Manufacturing
Production
Personnel

"This Committee should meet at least once every three months and be required to submit appropriate reports on its activities each quarter to the office of the President. The membership of this group should be sufficiently flexible to allow a rotation of personnel serving on the board. Each member, with the exception of the permanent Chairman, should serve for approximately one year but in no case should more than 25% of the group be replaced at any one time.

"This group would primarily determine the relative merits in the application of various policies with regard to costs, benefits to employees and the Company and make any recommendations for the improvement of existing policies.

"It is to be clearly understood that the authority of this agency in no way supersedes the responsibility of the line executives for effective follow-up but should aid and encourage them in the effective performance of this function."

The follow-up agency, after studying the problem, decided it was necessary to establish a method of insuring uniform enforcement of policies and practices throughout the organization. No organization could function with maximum efficiency unless problems, information, new policies and practices could be readily relayed and discussed up and down the line.

The mere act of issuing a directive to supervision does not guarantee effective action. It must be reinforced by discussion, example, and active follow-up.

for extra **PROFIT...**

install timing chain and sprockets at every engine overhaul!




LOOK HOW A SLIGHT TIMING LAG AFFECTS CAR PERFORMANCE

1 FIRE



LAG IN PISTON FIRING: Carbon, overheating, plug fouling, scored cylinders, fuel waste.

2 EXHAUST



LAG IN EXHAUST VALVE OPENING: Burning of exhaust valves, loss of compression.

3 INTAKE



LAG IN INTAKE OPENING: Low fuel charge, power loss, vacuum that pulls oil past rings.

4 COMPRESSION



LAG IN INTAKE CLOSING: Fuel and pressure backfire through carburetor, damage pistons and valves.



LINK-BELT

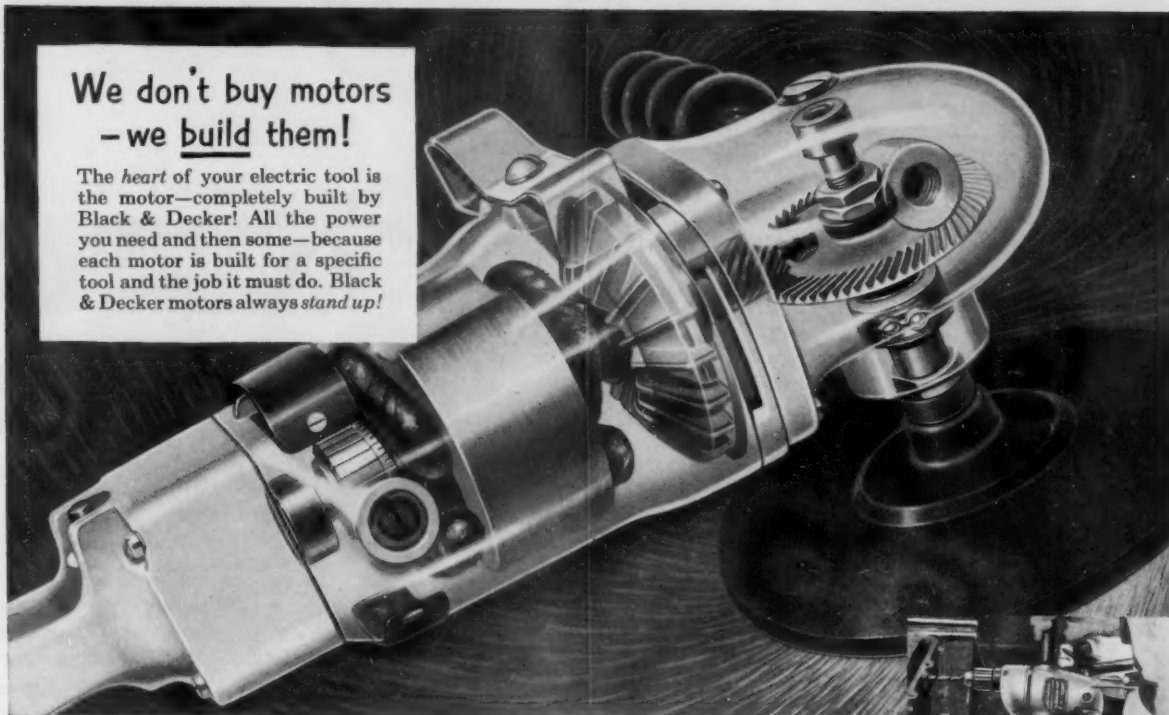
TIMING CHAINS AND SPROCKETS

LINK-BELT COMPANY: 220 South Belmont, Indianapolis 6, Ind. Warehouses in Principal Trading Areas. 13,700

Black & Decker® Electric Tools are **POWER-BUILT TO LAST!**

**We don't buy motors
— we build them!**

The heart of your electric tool is the motor—completely built by Black & Decker! All the power you need and then some—because each motor is built for a specific tool and the job it must do. Black & Decker motors always *stand up!*



Power-Built from the job up—*Power-Built* from the inside out—and *Power-Built* to take your heaviest, toughest jobs! That's every B&D tool you get in your hands... whether it's this versatile B&D 7" Sander or any other tool in the famous B&D line. *Power-Built* B&D

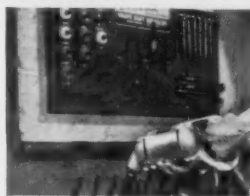
tools give you faster, better production—cut down on waste time, labor and materials—reduce your overall shop costs! Ask your B&D distributor about B&D speed, accuracy, greater power... or write: THE BLACK & DECKER MFG. CO., Dept. 3101, Towson 4, Maryland.

Service... one of 42 Black & Decker service branches is located "next door" to you; to give fast, expert service!

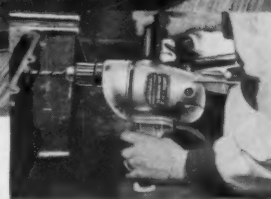
Look in the Yellow Pages under "Tools-Electric"



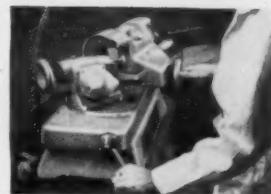
Black & Decker®
PORTABLE ELECTRIC TOOLS



VIBRO-CENTRIC KITS & BOARDS



DRILLS



VALVE REFACERS



VACUUM CLEANER

New Products Continued from Page 62

28 Wired Tires

United States Rubber Co.: This company has marketed a line of passenger car and truck tires containing flexible steel wire. Steel wire, the maker claims, makes a tire tread rupture-proof, doubles



cut resistance and eliminates tread cut growth. It is also said to make a tire run from 20 to 40 degrees cooler and helps prevent throwing off treads at high speed, according to the maker.

29 Wheel Truer

Bear Manufacturing Co.: This company has marketed a low price wheel truing machine. It is said to lock wheels in position and permit a check of corrections while the wheel is mounted. The unit is claimed to handle all wheels up to and including 8.20 x 15. An



average wobbly wheel can be trued without removing the tire and 90 per cent of jobs can be trued quickly with the tire on, the maker states.

30 Brake Bleeder Wrench

Herbrand Tools: A brake bleeder wrench said to fit all recent model Chrysler products has been introduced by this manufacturer. The company claims that the openings of $\frac{3}{8}$ and $\frac{7}{16}$ inch make the tool usable on many other brakes as well. The six point openings are said to hold well on worn or rounded screw heads.

31 Moisture Separator

Big Four Industries Inc.: The "Dri-Clean" air separator is said to provide high efficiency for intermittent air operations. This piston operated pneumatic moisture separator automatically separates and discharges water, free oil and contaminants as air is used, it is claimed. The attachment is intended to protect all types of intermittent compressed air operated equipment and machines, the maker states.



Wait!

don't blame all

Why do Light and Medium Trucks have so many brake problems? There are a lot of reasons (including cowboys) but only one sure solution—World Bestos "PFT" Sets! Let's look at the facts:

● A great many trucks in this class, especially delivery and route fleets, operate on tight schedules requiring many stops . . . with no lost time between stops. With others, the problem is heavy loads and hilly country. In almost all cases—speed, loads, terrain or whatever—experience shows that the service demands of light and medium trucks throw an exceptionally heavy burden on brakes.

Not enough friction, too much fade, too many adjustments, short lining life . . . these are common complaints that betray UNSAFE BRAKES, causing in addition, excessive shop time and expense. No wonder operators and service managers are plagued by poor safety records and high maintenance costs!



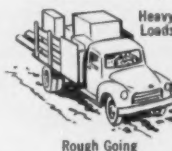
High-Speed, Many Stops

COWBOYS aren't "lilly white", either!

Slam-bang jockeys who gun it up then hit the brakes for "destroyer

landings" every time they stop make matters worse, of course. But hanging the cowboys won't solve the basic problem which is . . . inadequate brake lining.

SPECIALLY ENGINEERED BRAKE LINING THE ONLY SOLUTION—Passenger car brake lining (made up in larger segments and labeled "truck sets") can't stand this kind of punishment . . . any more than could passenger car engines, frames, bodies or tires. On the other hand, light and medium truck brakes aren't designed to accommodate heavy-duty blocks . . . nor are block formulas suitable for these operations.



Rough Going

Therefore, it is obvious that special friction formulas . . . engineered expressly for this rugged service . . . offer the only sure solution!

WORLD BESTOS "PFT" SETS ARE TAILOR-MADE FOR THE JOB—"PFT" (Prescribed Friction Truck) Sets are engineered exclusively for hard-driving, multi-stop service on light and medium trucks. Five different friction formulas are used in the most favorable combinations to give safe stopping power, positive fade control and longer wear for each type of truck and its braking system.

32

Grease Solvent

Minit Spray Corporation: This company has marketed an improved grease solvent packed in a self spray container. In use, Spraint DeGreaser is sprayed on a warm engine and allowed to stand for 20 minutes. Then the grease can be washed away with a water hose, the maker states. Recommended for use on most engines and machinery, one 12 oz. can is said to thoroughly clean a car engine.

33

Stripper for Plastics

Northwest Chemical Company: This firm has marketed a liquid paint stripper for chemically stripping paint and other finishes from plastics. The stripper is said to remove finishes in one application. According to the maker, Liquid Stripper No. 11 creates no fire hazard, odor, or fumes, and is non-toxic. In addition, it is said to contain only chemicals that can be flushed through usual waste disposal lines.

34

Touch-Up Paints

Tempo Products Co.: Tempo instant spray lacquers and enamels



are now offered in 179 shades to cover Buick, Chevrolet, Ford, Oldsmobile and Plymouth colors. The finishes come packed in 6-ounce aerosol spray cans with a cap that shows the shade of paint inside, according to the manufacturer. These cans feature a self cleaning nozzle and control button.

35

Regulator Tester

C. E. Niehoff and Co.: This company has added an improved voltage regulator tester to its line. The new model is a portable instrument designed for testing 6 and 12 volt systems. The over-



sized ammeter and voltmeter are said to be easy to read and include a separate scale for three voltage ranges. There are also selector dials for the voltage ranges and built-in resistance unit. The company offers a portable aluminum stand to use with the tester.

(Continued on page 130)

your brake troubles on the COWBOYS!

These skillful brake prescriptions are products of more than 30 years' experience devoted exclusively to the engineering and manufacture of fine friction materials.

"PFT" SETS GIVE YOU:



Precious Cargo Must Be Safe Beyond Question

- **Safe, dependable stopping power** at all times... right from the start. Requires no break-in period! Performs equally well for regular or power brakes!

- **Greater fade control.** Friction is more stable... recovers fast even at brake temperatures of 600° to 700° F.

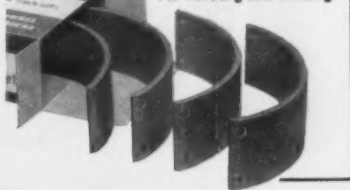
- **Long, uniform wear—trouble-free service.** "PFT" gives more miles between relines... pays for itself many times over by keeping trucks out of the shop and on the job... no matter how tough a job it is!

SAFETY... PLUS SAVINGS—Brake service men who install specially engineered "PFT" Sets give their customers the safest brake lining money can buy... plus substantial savings in repair bills, equipment downtime and brake maintenance expense. This kind of service will help you build a fine volume of high-profit business in the important light and medium truck field.

WORLD BESTOS "PFT" Sets

4-piece, single-axle sets for all light and medium buses and trucks requiring lining up to and including $\frac{3}{4}$ " thickness.

For Riveting and Bonding



SO...

don't shoot the cowboys!—Instead, shoot a call to your World Bestos Distributor or shoot this coupon to World Bestos for full information and prices on "PFT" Prescribed Friction Truck Sets for your operation!

WORLD BESTOS

New Castle, Indiana

Please send me full information and prices on "PFT" Sets for light and medium trucks.

COMPANY NAME _____

ADDRESS _____

CITY _____ STATE _____

YOUR NAME AND TITLE _____

New Products Continued from Page 129

36 Washer Solvent

Zecol Inc.: A windshield washer solvent said to be usable all year around in washers of all cars has been marketed by this firm. The maker claims that when mixed with water the solvent aids in the removal of bug splatter, road film, and so on. Said to help prevent jar breakage due to freezing the

solvent is packaged in 6 oz. bottles. The product will not mar the car finish or rubber parts, the maker states.

37 Solder-Flux

Farrelloy Company: This company has marketed a combination solder and flux which is claimed to apply like butter. Fas-Tin is

said to contain a dual-action flux that makes it possible to solder uncleaned surfaces. The solder works on all metals except aluminum and is packaged in 2 pound cans, according to the manufacturer.

38 Regulator Line

American Bosch Div., American Bosch Arma Corp.: This company has marketed three types of 12 volt generator regulators said to cover all passenger car replace-

Carb Master "Pict-O-Poem"

CAR SICK ...

When carburetor and fuel lines are all gummed up ... engine sluggish ... bucks and stalls ...

"Left at the Stop Line Again!"

CURE QUICK ...

Dissolve gum, varnish and carbon like magic—clean and condition carburetor and fuel lines ...

"Cleans Carburetor in Seconds"

JUST POUR ...

One can of Guaranteed Carb Master with ten gallons of gas keeps engine smooth-running for two-thousand miles ...

"TWO THOUSAND MILES OF Complete Fuel System Protection in every Can."

PROFITS SOAR ...

Naturally, customers buy all service from the Rust Master Dealer where they get guaranteed results!

"Excellent gas tank anti-freeze"

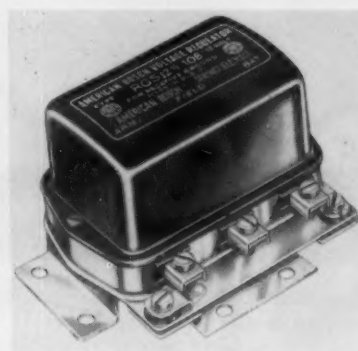
RUST MASTER — LEAK MASTER — SLUDG-MASTER — CARB MASTER — PARTS MASTER



PRODUCTS WORK WHILE YOU RIDE!

Rust Master
CHEMICAL COMPANY
MFG. CHEMISTS

50-56 CREIGHTON ST., CAMBRIDGE 40, MASS.
The silent partners of motor efficiency



ment needs. The 12 volt line of regulators parallels the company's 3 for All line of 6 volt regulators and is available in an introductory dealer's assortment, according to the manufacturer.

39 Anti-Freeze

Commercial Solvents Corporation: This firm has marketed an improved glycol type anti-freeze. Called "Peak," the anti-freeze is



said to feature a new blend of rust inhibitors. In addition, Peak stresses such qualities as oil free purity, anti-foam agents and ability to stay in any cooling system that holds water, it is said.

THE FASTEST SELLING . . . MOST EXCITING NEW DE SOTO IN 28 YEARS

A black and white photograph of a hand holding a pocket watch. The watch face is white with black numbers and hands. The number '3' is prominently displayed in the center of the watch face. The hand is holding the watch by its top ring. The background is a plain, light-colored surface.

every 3 minutes

somebody
buys
a new
DE SOTO

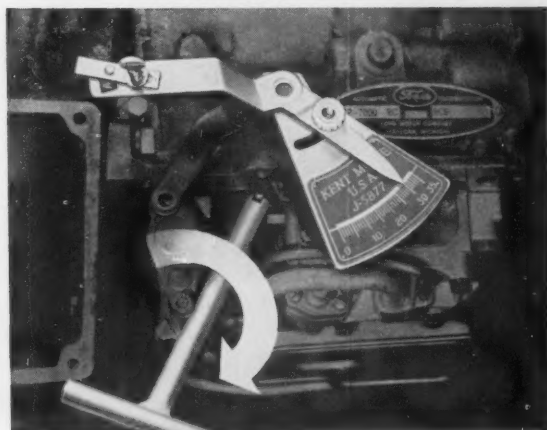
another reason
why it pays
to be a
DE SOTO
dealer

**Now-first
and only
complete**

Fordomatic-



Replacing the rear seal.



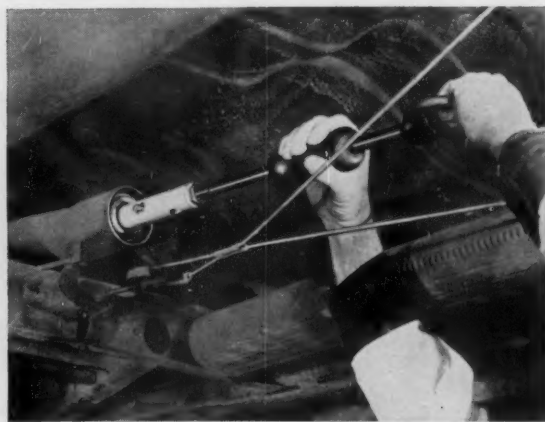
Bending the inner-throttle stop.



Making front band adjustment.

**75% of all Fordomatic—
Merc-O-Matic service jobs are
Simple External
Adjustments**

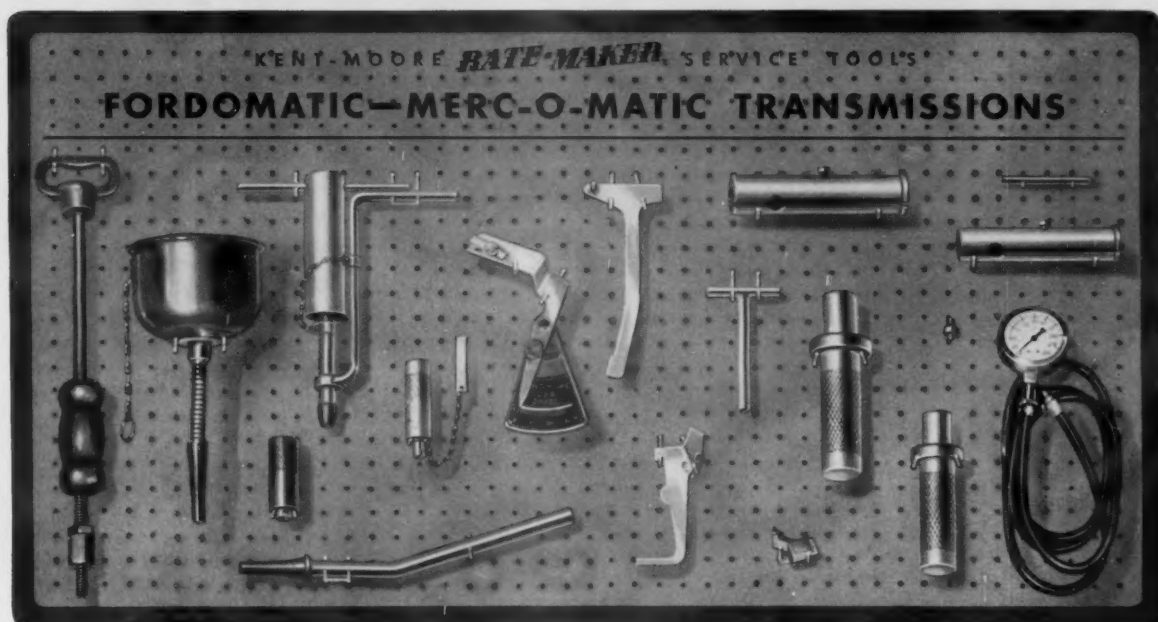
Shown here are
just some of the
many service opera-
tions you can
perform with this
Kent-Moore Rate-
Maker Kit.



Removing rear seal with slide hammer.

Merc-O-Matic

EXTERNAL ADJUSTMENT TOOL KIT



Here's how to cash in on these profitable jobs with the new, low-cost

KENT-MOORE *RATE-MAKER* KIT!

No longer do you have to turn down Fordomatic or Merc-O-Matic service profits.

You can now cash in on these money-making jobs with the new low-cost Kent-Moore Rate-Maker Service Tool Kit.

Actually, these external transmission adjustments—that may seem complicated—are really easy to perform. In fact, according to reliable industry sources, 75% of the maintenance operations required by the more than three

million Fordomatics and Merc-O-Matics already in use are simple external adjustments . . . performed without disassembling the transmission or even removing it from the car.

You can see from the four photographs here some of the external adjustments that are typical of the many types you can do. You do them right and you do them fast—with the right tools—Kent-Moore Rate-Maker Tools.

Your local Kent-Moore jobber has them. So "tool up" for extra profits . . . order your tool set today.

Special training clinics and service promotional material also available. See your Kent-Moore jobber or write today.

USE THE
RIGHT TOOL

USE THE
TOOL RIGHT!

KENT-MOORE
ORGANIZATION, INC.



Engineers and Manufacturers of Special Automotive Service Tools and Equipment

5-105 General Motors Building • Detroit 2, Michigan

Support Junior Achievement—Putting Youth in Business

*The words Fordomatic and Merc-O-Matic are registered trade-names of The Ford Motor Company.



Futuristic Styling Ford Research Car

A futuristic, styling research car, with engine compartment in the rear, was revealed by Ford Motor Company recently.

Named the Mystere, the full-size experimental car (see photo top of page) features rear fins; a hinged bubble-type, glass roof canopy; steering wheel that can be positioned in front of either front seat occupant, and rear engine compartment designed to accommodate either a gas turbine or conventional engine.

According to George W. Walker, vice president and director of styling—Ford Div., the Mystere was built as an experimental car to consider future styling innovations.

"The car was developed primarily to study styling themes," he said, "particularly in new contours of sheet metal.

"It also explores an entirely new 'open feeling' in styling, with complete integration of interior and exterior styling."

Designed with an exceptionally low center of gravity, the two-door, four-passenger car is the same height—52 inches—as the Ford Thunderbird. It has a wheelbase of 121 inches, length of 220 inches and a maximum width of 80 inches.

The Mystere would be entered by raising the forward half of the glass bubble-type roof canopy, hinged to the hood cowl. In synchronization with the canopy motion, small half doors below the belt would swing out for easier entrance. The rear portion of the canopy is in a fixed position.

The roof structure permits almost unlimited visibility. It has no roof rail, sliding windows or corner windshield post. The car would be fully air-conditioned throughout.

At center of the roof, the two canopy sections join at a steel meeting-bar, similar to that on the Ford Crown Victoria. The steel member, which serves as a roll bar, also is linked to a scoop at the front of the roof for intake of fresh air for all internal air systems, heat, air conditioning and fresh air ventilation.

6 NEW TIME SAVING TOOLS to make money for you!



Each year's new models make your job more difficult. Today more than ever the right tools will save hours of time plus parts and reduce unnecessary delays. These are only a few of the many outstanding OTC special tools that do tough jobs fast.

DISTRIBUTOR LOCK NUT WRENCHES



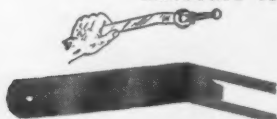
A new set of five distributor lock nut wrenches fit practically all '55 passenger car models. Make an otherwise tough job simple.

OVERHEAD VALVE TAPPET ADJUSTING TOOL



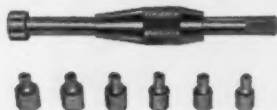
Adjust overhead valve tappets with any 1/2" square drive socket. Easy to use with handle set at 15° for clearance over hot manifolds and other obstructions.

CHRYSLER DOOR HANDLE REMOVING TOOL



New door hand window crank removing tool for all Chrysler built cars. A terrific time, money and temper saver.

UNIVERSAL CLUTCH ALIGNING SET



A special set of tools designed to align single disc clutches on any passenger car or truck. Eliminate time and effort of tearing apart transmissions.

HEAD BOLT WRENCHES



Twelve new head bolt wrenches carefully designed, forged and heat treated to do a precision job of torquing head bolts on a wide variety of auto, truck and tractor engines.

OIL FILTER RATCHET BOX WRENCH



Handles oil filter service jobs on most late model passenger cars. Fully heat-treated highest quality alloy steel with thin ratcheting action head and double hex 12 point opening for sure handling in cramped quarters.

See your jobber or write us

OWATONNA TOOL COMPANY
321 CEDAR STREET • OWATONNA, MINNESOTA



U. S. POST OFFICE Department has purchased through the General Services Administration 2,000 sit-stand type mail trucks. The $\frac{3}{4}$ -ton trucks are equipped with right-hand drive and automatic transmissions. Inspecting one of the new mail trucks in photo at right are (left to right): K. C. Deacon, vice president and truck operations manager, Dodge Division, Chrysler Corporation; Lou Fageol, president of Twin Coach Co.; Joseph Flontek, Post Office inspector; William Pennington, chief of the technical branch, U. S. Post Office Department; Joseph Pauze, assistant chief of procurement, General Services Administration, and Paul Churan, Post Office automotive engineer.



Jaguar Introduces 1956 Line of Cars

Jaguar Cars has unveiled four of its 1956 line of cars in Jaguar showrooms throughout the United States recently. The new Jaguars are the Mark VII "M" family sedan and the XK-140 sports car line — comprising a two-seater open Super Sports roadster, a convertible and a hardtop coupe. All are powered by the XK engine, which develops from 190 to 220 horsepower.

New GM Motorama Opens January 19

General Motors will send a new and expanded version of its spectacular industrial show, the Motorama, to five major cities in the United States in 1956, it was announced recently by GM President Harlow H. Curtice.

With a new group of experimental "dream cars," more educational engineering and research exhibits than ever before, and a new format for the Motorama stage production, the 1956 show will open at its traditional Waldorf-Astoria Hotel site in New York City, January 19-24.

The admission-free show will appear later in Dinner Key Auditorium, Miami, Fla., Feb. 4-12; Pan Pacific Auditorium, Los Angeles, Calif., Mar. 3-11; Civic Auditorium, San Francisco, Calif., Mar. 24-April 1; and the National Guard Armory, Boston, Mass. April 19-29.

standard in cars for 32 years



*dependable
source for
all caps*

PRESSURE CAP

OIL FILLER CAP

LOCKING GAS CAP

STAINLESS GAS CAP

Service outlets know *Stant EVRSEAL* Caps have always been built to quality standards . . . not to a price . . . engineered in co-operation with automotive engineers for original equipment at the car factories. They insist on *Stant* quality because they know that a bad pressure cap will not hold pressure, fail to operate, cause volatile anti-freeze loss. They also check hose, clamps, thermostat, fan belt, etc. to build sales and take proper care of their customers' vehicles.

recognized standard

32 years of original equipment experience on filler caps for cars, trucks, tractors and direct to radiator manufacturers. Stant has been the complete line source for a generation! Write today for catalog on the Stant Cap Merchandiser . . . perpetually-working silent salesman . . . easy-to-find radiator caps, oil filler caps, gas caps.

STANT MANUFACTURING CO., INC.
Connersville, Indiana



*Used on America's Finest Automobiles
as Standard Equipment for a generation*

Calendar of Coming Events

Dealers Conventions

Jan. 28-Feb. 1, 1956—39th General National Automobile Dealers Assn. Convention, Washington, D. C.
Feb. 26-27—Louisiana Automobile Dealers Assn., Hotel Roosevelt, New Orleans, La.
May 14-15—Pennsylvania Automotive Assn., The Inn, Buck Hill Falls, Pa.
May 26-28—South Carolina Automobile Dealers Assn., Ocean Forest Hotel, Myrtle Beach, S. C.

June 28-July 1—New York State Automobile Dealers, Inc., Directors and County Vice-Pres. Spring Meeting, Lake Placid Club, Lake Placid, N. Y.
Sept. 17-18—Minnesota Automobile Dealers Assn., St. Paul Hotel, St. Paul, Minn.
Sept. 30-Oct. 3—New York State Automobile Dealers, Inc., 33rd Annual Convention, The Concord, Kiamasha Lake, N. Y.
Oct. 21-23—Florida Automobile Dealers Assn., Fort Harrison Hotel, Clearwater, Fla.

Automobile Shows

Jan. 7-15—Chicago Auto Show, International Amphitheatre, Chicago, Ill.
Jan. 7-15—Columbus Auto Show, Veterans Memorial Bldg., Columbus, Ohio.
Jan. 7-15—27th Annual Automobile Show, National Armory, Washington, D. C.
Jan. 7-15—Houston Auto Show, Houston Coliseum, Houston, Texas.
Jan. 7-15—San Francisco Auto Show, Civic Auditorium, San Francisco, Calif.
Jan. 12-14—McKeesport Auto Show, Palace Garage, McKeesport, Pa.
Jan. 13-22—Seattle Auto Show, Field Artillery Armory, Seattle, Wash.
Jan. 14-22—St. Louis Auto Show, Oakland Ave., Arena, St. Louis, Mo.
Jan. 16-21—Grand Rapids Auto Show, Civic Auditorium, Grand Rapids, Mich.
Jan. 21-28—Baltimore Auto Show, Fifth Regiment Armory, Baltimore, Md.
Jan. 21-28—Pittsburgh Automobile Show, Hunt National Guard Armory, Pittsburgh.
Jan. 21-29—Cleveland Auto Show, Cleveland, Ohio.
Jan. 21-29—Des Moines Auto Show, Veterans Memorial Auditorium, Des Moines, Iowa.
Jan. 25-29—San Diego Auto Show, Electric Bldg., Balboa Park, San Diego, Calif.
Jan. 28-Feb. 4—Rochester Auto Show, Rochester War Memorial Auditorium & Exhibit Hall, Rochester, N.Y.
Jan. 28-Feb. 5—Quad-City Autorama, Rock Island, Ill.
Feb. 3-12—Omaha Auto Show, New Municipal Auditorium, Omaha, Neb.
Feb. 5-12—Dallas Auto Show, Fair Park, Dallas, Tex.
Feb. 6-11—Denver Auto Show, Coliseum, Denver, Colo.
Feb. 11-18—Milwaukee Auto Show, Milwaukee Arena & Auditorium, Milwaukee, Wis.
Feb. 12-19—Lansing Auto Show, Civic Center, Lansing, Mich.
Feb. 18-26—Detroit Auto Show, Michigan State Fair Grounds, Detroit, Mich.
Feb. 19-25—Syracuse Auto Show, Onondaga County War Memorial Building, Syracuse, N. Y.
Feb. 22-26—6th Annual National Autorama, State Armory, Hartford, Conn.
Feb. 25-March 3—Kansas City Auto Show, Exhibition Hall, Municipal Auditorium, Kansas City, Mo.
March 7-11—Spokane Auto Show, Coliseum, Spokane, Wash.
March 9-11—Kansas Motor Show, Sports Arena, Hutchinson, Kansas.
March 16-18—Wichita Auto Show, University of Wichita Field House, Wichita, Kansas.
April—Lewiston Auto Show, Lewiston Armory, Lewiston, Me.

General

Jan. 19-24—General Motors Motorama, Waldorf-Astoria, New York, N. Y.
Feb. 4-12—General Motors Motorama, Dinner Key Auditorium, Miami, Fla.
Feb. 6-9—Automotive Accessories Manufacturers of America Exposition
(Continued on page 139)

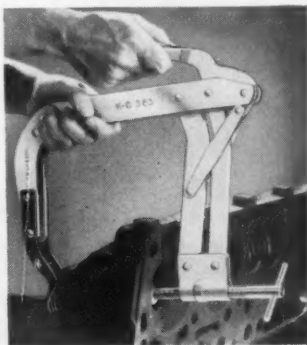
NEW K-D Valve Tools

Specially designed for modern overhead V-8's.

Easier to use and operate. Speeds up the Job.

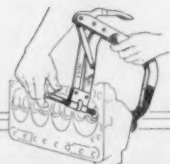
More convenient Operating Handle ends stretching and reaching in awkward positions.

Sturdy build—has what it takes on double valve springs!



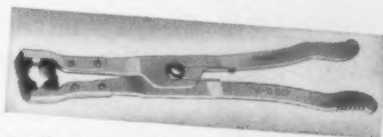
K-D 383 COMPRESSOR
Services all the late GM, Ford-built, Chrysler-built, Hudson, Nash, Packard, Studebaker valve-in-head V-8's. Location of Operating Handle on back of frame provides easier handling, faster use. After Plunger Bar is set for first spring, remaining are serviced by opening, closing Operating Handle. Heavy bar steel. No. 32 Offset Jaws furnished. Other interchangeable K-D Jaws available. (No. 35 Straight, No. 38 Extra Hi-Offset.)

Raising first spring to set depth adjustment. On Chryslers—span head with tool, servicing valve from far side.



Magnetic Valve Keeper Insert

Serves this type and size split keeper.



K-D 607. Easy loading, self-supporting on the valve stem. Jaw magnets hold keepers securely in proper alignment. 8 inches long, rustproof cadmium finish.

K-D TOOLS

AT YOUR JOBBER'S

K-D MFG. CO., LANCASTER, PA.

FREE... New K-D Catalog, right-off-the-press!
Over 150 Tools to make hard jobs easy. Write today.

FACTS About the 1956

CHILTON MANUALS

THE LEADING AUTOMOTIVE MANUALS



MOTOR AGE

AUTOMOBILE REPAIR MANUAL

will be delivered in **FEBRUARY**

Up-to-the-minute service procedures and technical data.

New pictures of the latest units.

Completely revised. Liberally illustrated.



The GIANT MOTOR AGE

FLAT RATE and SERVICE MANUAL

will be delivered in **MARCH**

The new 1956 Flat Rates, Specifications, Parts Prices.

The new 1956 Service Procedures and Technical Data.

Completely revised. Pictures galore.



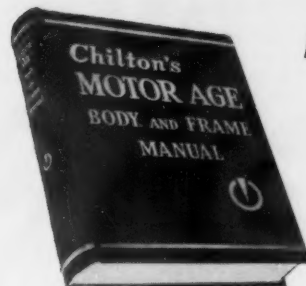
MOTOR AGE

FLAT RATE and PARTS MANUAL

will be delivered in **MARCH**

The new 1956 Flat Rates, Specifications, Parts Prices.

Famous exploded view parts pictures completely revised. Thousands of them.



MOTOR AGE

BODY and FRAME MANUAL

will be delivered in **APRIL**

The big annual book and the supplementary parts price revision books.

The original book of its kind.

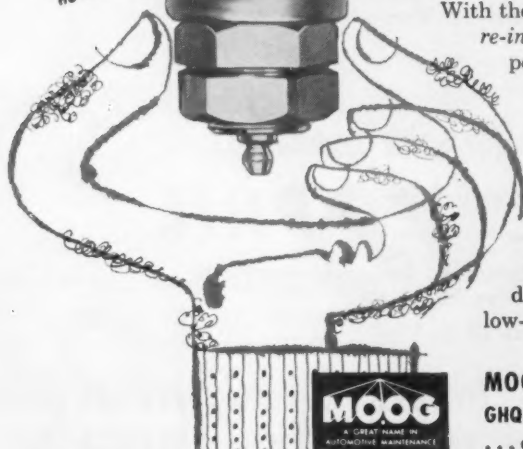
PRODUCED BY THE LARGEST AND OLDEST AUTOMOTIVE PUBLISHER
CHILTON COMPANY, CHESTNUT AT 56TH ST., PHILADELPHIA 39, PA.

*Advertising Agency-
This item is HOT!
Let's run
this ad
again.
H.P. Moog*

MOOG
introduces a
revolutionary new
steering
assist — K-251

...full-floating conversion
kit adjusts out
idler arm play!

SELLS ITSELF!
A twist of a nut
will convince
you. No slack,
no binding!



With the new Moog Ball • Bearing Idler Arm Kit K-251, you re-install the original Frame Bracket and Idler Arm. And they perform better than new . . . with the idler arm full-floating between grease packed and fully enclosed ball • bearings!

Unlike conventional idler arm kits, there is no possibility of binding (friction) or slack (looseness) between screw parts. This frees steering, eliminates noise and prevents any toe-in change due to idler arm play!

SEE FOR YOURSELF how the Moog Ball • Bearing Idler Arm Kit adjusts out steering play in a simple demonstration at your Moog Jobber's. Then, buy the low-cost Popular Assortment now being featured.

MOOG INDUSTRIES, INC. • ST. LOUIS 14, MO.
GHQ for Chassis and Suspension Parts
... and Chrome+Plus Piston Rings

Truck Wheel Changes — a one-man job with **KEN-TOOL** IMPACT WRENCH SETS

Ken-Tool Impact Wrench Handles swing freely through a 120° arc . . . strike with tremendous force. Loosen rusted, frozen nuts fast. Long shaft keeps handle clear of truck or bus bodies.

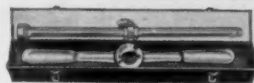


TR-42 Set

5-piece Impact Wrench Set for all Ford and Budd Wheels.



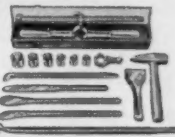
TR-41 Set



10-piece Impact Wrench Set for 90% of popular trucks.

TR-40 Set

18-piece set—Impact Wrench Set, plus 9 Ken-specialized Tire Changing Tools.



TX-9

Budnut Wrench, a "must" for Budd and Ford wheels. Holds outer cap nut while turning inner. No chiseling necessary.



SEE YOUR JOBBER on the complete line of Job-Designed Ken-Tools. Forged by the largest exclusive manufacturer of top-quality Tire-changing Tools and Equipment. **THE KEN-TOOL MFG. CO., AKRON 5, OHIO.**



Buy Bonds



MEETS EVERY SEALING NEED!

TiteSeal®

GASKET & JOINT
SEALING COMPOUND
7 BASIC BLENDS

Makes all assemblies
leakproof and
pressure tight



at Automotive Jobbers

RADIATOR SPECIALTY CO.
Charlotte, North Carolina



Calendar

Continued from Page 136

tion, Navy Pier, Chicago, Illinois.
Feb. 21-22 — NSPA and MEWA National Conventions, San Francisco, Calif.

March 3-11—General Motors Motorama, Pan Pacific Auditorium, Los Angeles, Calif.

March 6-8 — Society of Automotive Engineers, Passenger Car, Body and Materials Meeting, Hotel Statler, Detroit, Mich.

March 24-Apr. 1—General Motors Motorama, Civic Auditorium, San Francisco, Calif.

Apr. 6-8—Independent Garage Owners of America, annual meeting, Wichita, Kansas.

Apr. 16-20—New York's Annual Safety Convention and Exposition, Hotel Statler, New York, N. Y.

Apr. 19-29—General Motors Motorama, National Guard Armory, Boston, Mass.

April 28-May 6 — International Automobile Show, Exhibition Hall, Coliseum, New York, N. Y.

June 3-8—Society of Automotive Engineers Summer Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J.

U. S. Auto Club Official Emblem

The shield below is a black-and-white replica of the official red-white-and-blue emblem of the recently-formed United States Auto Club.

The words "United States" appear in white letters against a blue background at the top of the shield.



The words "Auto Club" are superimposed in blue on the red-and-white-striped portion of the emblem.

The Contest Committee of the United States Auto Club succeeded the Contest Board of the American Automobile Association as the governing body of automobile racing in this country on January 1, 1956.

Here's what's new about the **MOOG** BALL-BEARING IDLER ARM KIT

PATENT PENDING

NEW SAFETY—Positive steering control! **NEW ECONOMY**—Maintains wheel alignment! **NEW CUSTOMER SATISFACTION**—Users claim an amazing "power steering" effect! **NEW EASE OF INSTALLATION**—Any garage that can reset toe-in can install! **NEW BUSINESS**—For idler arm replacement and as conversion kit on hard-to-steer cars!



Kit K-251 fits 80% of cars:

Ford, Mercury, Lincoln, Plymouth, DeSoto, Chrysler, Pontiac, Buick, Oldsmobile, Cadillac, Packard, Willys, Hudson and Nash.

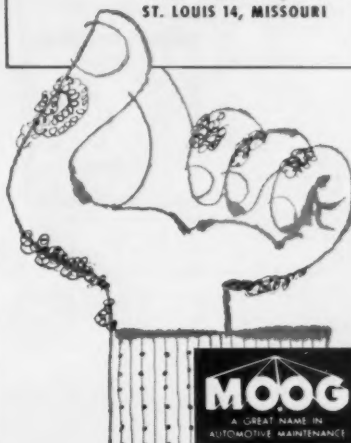
Kit K-252 fits Dodge

Kit K-253 fits Packard

Kit K-254 fits Chevrolet

Write for Moog Catalog 1024 for years and models of cars, other information.

MOOG INDUSTRIES, INC.
ST. LOUIS 14, MISSOURI



NOW! YOU CAN

Set Valve Clearance

Exactly Right!

Every Time with

P&G Valve-Gapper



New Technique 100% Accurate

Now you can set valve clearance on most OHV gasoline and diesel truck engines uniformly and with micrometer accuracy instead of depending upon individual "feel".

Check these **VALVE-GAPPER** advantages:

- Reduces Valve Adjustment time as much as 50%.
- Eliminates Inaccuracies of Individual "Feel".
- No Change in Adjustment Procedure; ONLY Method of Measurement Differs.
- Serviceman can "SEE" Clearance on Dial Indicator BEFORE, DURING and AFTER adjustment.
- Both Hands FREE to Use Adjusting Tools.
- Instantly Spot Defective Hydraulic Lifters, "See" the condition of lifters... show car owners which valves are sticking and noisy... Use the VALVE-GAPPER to free sticking lifters.
- Reduce "Service Comebacks" with the VALVE-GAPPER.

Models available to fit almost every OHV passenger car and truck gasoline engine... also models to fit GM, Cummins and other Diesel engines. Ask your jobber for the model best suited to your needs.

BOTH HANDS FREE

Serviceman always has both hands free to use adjusting tools—he can "see" exact clearance before, during and after adjustment.



Order From Your Jobber or Write

P&G MANUFACTURING CO., Dept. 12-A
305 N. E. Russell Street, Portland 12, Oregon
Please send me Valve-Gapper literature and prices.

Firm Name _____

Your Name _____

Address _____

City _____ Zone _____ State _____

Engines Served:

- ☐ Passenger Car ☐ Diesel
☐ Gas Truck ☐ Gas Industrial

My Jobber is: _____

New Triumph TR3 Has London Debut

A new British sports car, the Triumph TR3, has been announced by Standard-Triumph Motor Company, Inc., N. Y. The announcement coincided with the appearance of the new car at the London Motor Show where it was on exhibition with the Triumph TR2.

Two major changes in the Triumph TR3 over the TR2 are immediately noticeable. A heavy chrome grill is now fitted in the front air intake, and the cockpit space has been enlarged so that an optional rear passenger seat may be installed to increase passenger capacity. The large rear trunk

"Bill: I married an adagio dancer—been married three weeks and I've never kissed her yet.

John: Don't you love her?

Bill: Sure, I love her, but I can't catch her.

space has been retained.

Power has been upped to 100 hp at 4800 rpm and the fuel system has been fitted with Twin SU:H6 carburetors which proved to be such a success at last year's Le Mans. Overdrive, which is available as optional equipment, is operable in three forward gears, giving the Triumph seven forward gear ratios.

Other finishing touches are stainless steel fender beadings, chromed hinges on trunk and hood, and a chromed passenger grab handle.

An optional detachable hard top may be ordered with the car making the Triumph an all season car in a matter of minutes.

The Triumph TR3, like the

Triumph TR2, is manufactured by The Standard Motor Co., Ltd., Coventry.

The port of entry price of the TR3 is reported to be \$2599 with soft top, \$2795 with hard top. The 1956 Triumph TR2 will continue to be available at \$2499.

BOWERS BATTERIES

Always Better

BOWERS BATTERY & SPARK PLUG CO., READING, PA.

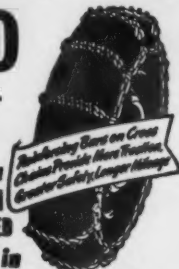
WEED

SELL • SERVICE •
• REPAIR •
TIRE CHAINS

Always Recommend
**WEED AMERICAN
V BAR-REINFORCED**

The Best Buy in

TIRE CHAINS



JUST SPRAY IT ON!

**ACRA-SEAL®
PLASTIC SPRAY**

Waterproofs-Rustproofs
Seals out moisture, oils
and greases, insulates
ignition systems.



with DAUBER
ask for **IGNITION SEAL**
at Automotive Jobbers

RADIATOR SPECIALTY CO.
Charlotte, North Carolina

**Buy
Bonds**



**Buy
FROM THE MANUFACTURER**

- Who makes its own...**
- Brake Shoes (Bonded)
 - Brake Shoes (Unlined)
 - Brake Lining (Sets and Rolls)
 - Brake Lining (for bonding)

For all cars
Jobbers in all principal cities

L. J. MILEY CO.

18 S. SANGAMON ST.
CHICAGO 7, ILLINOIS

FACTORIES AT CHICAGO AND
NORTH MANCHESTER, INDIANA



On the production line in a large midwest automatic transmission

plant, a Johnson bearing is pressed into the rear pump housing.

Johnson Bearings Help Maintain Long Service Life In Automatic Transmissions

The long, trouble-free service enjoyed by owners of automatic transmissions produced in this large midwest plant stems from the exacting quality control of all components and operations.

For example, the assembly and testing rooms are air-conditioned and dust-proof. There is no smoking permitted in these rooms. Special care is taken to prevent dust from getting into the transmission. All machines are wiped with lintless rayon cloths. Even the floors of these rooms are coated with oil to keep down dust.

With such close attention to every detail it is easy to understand why Johnson was selected as one supplier of the steel backed bearings, both copper alloy and babbitt lined, used in the assembly. Johnson takes great pains in the manufacture of these bearings to assure that these critical parts will be made of an alloy that is consistent in composition and that the bearings

are uniform in size and surface finish.

While these transmissions are designed and built for long service life they sometimes have to be rebuilt, particularly on older model cars. When rebuilding it makes good sense to ask your distributor for Johnson transmission bearings which are supplied in sets for all the popular models. Then you are sure that the quality and fit will be the same as the bearings used originally.

The acceptance of Johnson quality and service is not unusual in the automotive field, for Johnson is an important supplier of main, cam and rod bearings—and bearings for practically every other component of the motor car, truck or diesel engine made today. To make sure that you rebuild engines and transmissions with the same quality bearings as were used originally—ask your distributor for Johnson bearings. Johnson Bronze Co., 455 S. Mill Street, New Castle, Pa.



Johnson Bearings

Get into *BIG PROFIT* "BEAR" ALINEMENT BUSINESS

WITH LOW COST #128 SET

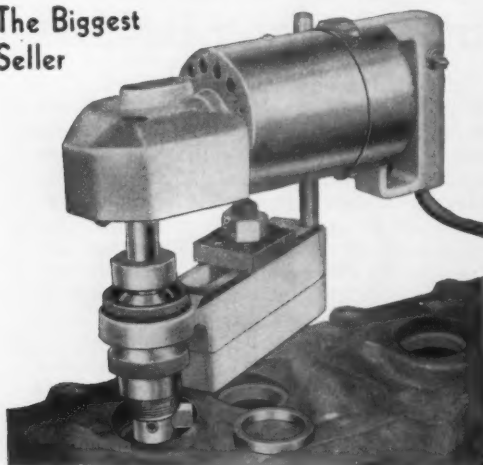


No matter how small your operation, here's your chance to get into big profit alinement under the nationally-advertised "BEAR" Sign! The new "Bear" #128 set is so simple, so accurate and so fast you can easily make hundreds of dollars net profit during the first year! And it takes up no more space than a small tool board! **DON'T DELAY ANY LONGER!** Ask your Jobber for details. Bear Mfg. Co., Rock Island, Illinois.

1286

The *PIONEER* Tool FOR INSTALLING VALVE SEAT RINGS

The Biggest
Seller



THE FIRST . . . and still the MOST POPULAR, MOST PRACTICAL, SIMPLEST, MOST UNIVERSAL tool of its kind made.

EVERLASTING . . . the first tools made over 25 years ago are still in service.



K.O. LEE CO.
ABERDEEN, SOUTH DAKOTA

If it's made by Lee it's a "Knock-Out"

RIMAC SPRING TESTERS *Come* *Highly Recommended*



Manufacturers of automobiles, trucks and farm machinery have made Rimac Valve and Clutch Spring Testers standard plant equipment—recommend them for service and overhaul operations.

Etched metal scale at sides indicates exact length of spring; adjustable stop allows quick testing of an entire lot. Suitable for springs up to 2 inches diameter, 4½ inches length—capacity 0-250 lbs.

Ask your jobber or write for literature.

RINCK-McILWAINE INC.

16 HUDSON STREET, NEW YORK 13, N. Y.

Shelton Hotel

NEW YORK'S SKYSCRAPER HOTEL

1200 MODERN ROOMS

- For comfortable rooms... sensibly priced... convenience of location and hospitality... the SHELTON is your best buy!
- Write hotel or see your travel agent for reservations and information on our money-saving "ALL EXPENSE TOURS."

TV IN EVERY ROOM
No Extra Charge to Guest

SWIMMING POOL
STEAM ROOM
PRIVILEGES
EXTENDED TO GUESTS
• SUIT AND TOWEL
SUPPLIED
• GARAGE FACILITIES

LEXINGTON AVENUE AT 49th STREET

AAA APPROVED

The Finest Automotive Trade Show of the Year

FEBRUARY 23, 24, 25, 26, 1956

CIVIC AUDITORIUM

SAN FRANCISCO, CALIFORNIA

Pacific Automotive Show

*Make your arrangements to sponsor and attend the
largest automotive trade event ever held for the
Western Market*

Watch for the great February Motor Age Salute to the West . . .

**Packed with articles to help
you do better service work and make more profits**

- | | |
|--|--|
| 1. The growth of automotive manufacturing wholesaling, and retailing in the West. | repairs, super service stations and TBA merchandising. |
| 2. A series of "How-Western-Shops-Do-It" articles on tune-up, brake service, wheel alignment, body shop operation, general | 3. Special photos of the West along with illustrations of western automotive service facilities. |

The West has its own way of doing things

Motor Age readers will learn new merchandising tricks from the aggressive, imaginative, independent repair shops and car dealers in the West. Promotions like "Tune up by Sutton" will be featured in this great Western issue.

AC Spark Plug Div.
 Filler Caps 95
 Valve Lifters 115
 AP Parts Corp.....88-89
 Air Express Div..... 73
 American Chain & Cable Co., 140
 American Motors Corp..... 28
 Armstrong-Victor 24
 Auto Specialties Mfg. Co..... 109

Bear Mfg. Co..... 142
 Bendix Aviation Corp.
 Eclipse Machine Div..... 82
 Binks Mfg. Co..... 94
 Black & Decker Mfg. Co..... 127
 Bonney Forge & Tool Wks.... 122
 Borg & Beck Div..... 80
 Borg-Warner Corp.77-78-81
 Bowers Battery & Spark Plug
 Co. 140
 Breeze Corporations 110

Carter Carburetor Co..... 20
 Champ-Items, Inc. 116
 Champion Spark Plug Co....30-31
 Chevrolet Div. 85
 Chicago Pneumatic Tool
 Co.112-113
 Classified Advertisements 114
 Commercial Credit Corp..... 5
 Cornwell Chemical Corp..... 114

Delco-Remy Div. G.M.....100-101
 De Soto Div. Chrysler Corp... 131
 Dodge Div. Chrysler Corp.... 8

Echlin Mfg. Co.....12-13
 Edelmann & Co..... 117
 Eis Automotive Corp..... 120

Federal Mogul Service Div.... 15
 Felt Products Mfg. Co..... 75
 Fram Corp. 99
 Frenchtown Porcelain Co.... 6

Grey Rock Div. Raybestos-
 Manhattan, Inc. 21
 Grote Mfg. Co..... 108

Index to Advertisers

This Advertisers' Index is published as a convenience, and not as part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert



Harley-Davidson Motor Co.... 98
 Heller Tool Co..... 104
 Herbrand Div. 84
 Heyer Industries, Inc..... 118
 Holley Carburetor Co..... 97
 Homestead Valve Mfg. Co.... 111
 Holmes Co., Ernest 121
 Hotel Shelton 142
 Inland Mfg. Co..... 90
 Johnson Bronze Co..... 141
 Johnson Products, Inc..... 86

KD Mfg. Co..... 136
 Ken Tool Mfg. Co..... 139
 Kent-Moore Organization, Inc.
 132-133
 Lee Co., K. O..... 142
 Link Belt Co..... 126
 Lion Oil Co..... 7

Mercury Div. Ford Motor Co. 119
 Miley Co., L. J..... 140
 Minnesota Mining & Mfg. Co. 145
 Monroe Auto Equipment Co... 105
 Moog Industries, Inc.....138-139
 Moraine Products Div.....18-19
 Morse Chain Co..... 79

New Britain Machine Co.... 17
 Niehoff & Co., C. E..... 96

Oil Dri Corp. of Amer..... 114
 Owatonna Tool Co..... 134

P & G Mfg. Co..... 140
 Pacific Automotive Show.... 143
 Packard Div. Studebaker-
 Packard Corp.106-107
 Packard Electric Div.....22-23
 Perfect Circle Corp..... 71
 Permatex Co., Inc..... 1
 Pittsburgh Plate Glass Co.... 4
 Pure Oil Co..... 69
 Purolator Products, Inc..... 123

Radiator Specialty Co....139-140
 Ramsey Corp.3rd Cover
 Rinck McIlwaine, Inc..... 142
 Rochester Products Div..... 87
 Rust Master Chemical Co.... 130

Schrader's Son, A. 103
 Sealed Power Corp.....2nd Cover
 Sealed Power Corp. (Ameri-
 can Hammered Div.)..... 16
 Snap-on Tools Corp..... 83
 Standard Motor Products Co.. 2
 Stant Mfg. Co..... 135
 Sun Oil Co..... 32
 Sunnen Products Co..... 92

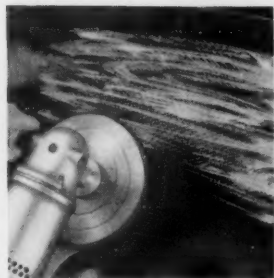
Texas Co. 14
 Thermoid Co.Back Cover
 Thor Power Tool Co..... 93
 Timken Roller Bearing Co... 29
 Triple A Specialty Co..... 102

Union Oil Co..... 91
 United Motors Service.....10-11

Wagner Electric Corp.....26-27
 Weaver Mfg. Co.....124-125
 Wilkening Mfg. Co..... 9
 Willys Motors, Inc..... 25
 World Bestos Corp.....128-129



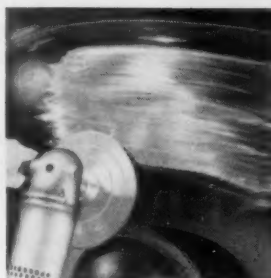
CUT PRIMER COSTS IN HALF with 3M Discs and the 3M System!



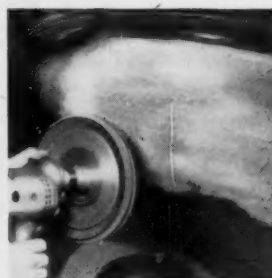
1. START with 3M Disc, Grit 16, Type B for grinding down heavy solder or removing gummy paint. Fast-cutting open-coated 3M Disc doesn't load or glaze—speeds you through jobs. When sparks start flying, change to 3M Disc, Grit 24, Type A.



2. RESTORE contours, remove non-filling materials with cool-running 3M Disc, Grit 24, Type A. Self-sharpening, this 3M Disc doesn't burn or warp metal surfaces. Next step: 3M Disc, Grit 50, Type A and 50% savings on primer costs.



3. CONDITION and prepare metal for final finishing with a 3M Disc, Grit 50, Type A. Coarse scratch marks and surface irregularities disappear fast, so less surfacer is needed. You make additional savings when you switch to next 3M Disc.



4. FINISH surfaces with 3M Production Paper Feathering Disc, Grit 80D, which conditions and feathered edges metal in one easy operation. This final step saves you up to 80% in primer surfaces. With less primer surface you cut drying time.

Ask your 3M Salesman for your free copy of the "3M System of Controlled Cost Appearance Reconditioning", containing other cost-cutting ideas.

3M Automotive Products

Order Now from your 3M Jobber

Made in U.S.A. by Minnesota Mining and Mfg. Co., St. Paul 6, Minn.—also makers of "SCOTCH" Brand Pressure-Sensitive Tapes, "SCOTCH" Brand Magnetic Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Adhesives. Export Sales Office: 99 Park Avenue, New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario.



The Last Laugh



The bank cashier told his new assistant to "Count this pack of bills to make sure there are one hundred."

The new employee counted up to "54, 55, 56," and then threw the package in the drawer, remarking to the man next to him: "If it's right this far, it's probably right all the way."

A husband who is busy as a bee may wake up someday and find his honey missing.

Teacher's note: Johnny is a good student, but I must find some way to take his mind off the little girls.

Mother's reply: If you find the way, let me know. I'm having the same trouble with his father.

Boss: Smith, I heard you've been praying for a raise.

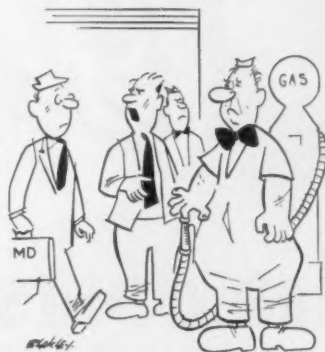
Smith: Well, . . .

Boss: Look here, I don't like the idea of your going over my head.



"Hey, Boss, —How much we charge to wash elephants?"

HANK'S GARAGE



"Just when we're locking up and ready to go home, Hugo has to see if his finger would go in the end of the gas hose."

One housewife to another: "What with my completely automatic kitchen and laundry, I let my maid go and hired a mechanic."

Sign on an auto camp in Comfort, Texas, located between the towns of Alice and Louise: "Sleep in Comfort, between Alice and Louise."

Policeman (to a man staggering home at 3 a.m.): Where are you going at this time of night?

Man: To a lecture.

He had taken his youngest son to the pet shop to pick out a puppy as a birthday present. The lad spent half an hour looking over the assortment of pooches in the window.

"Decided which one you want?" asked his father.

"Yes," replied the lad, pointing to one puppy which was wagging his tail enthusiastically. "I want the one with the happy ending."

Phil: "Where are you going on your vacation?"

Will: "Haven't decided yet. I want to take a trip around the world, but my wife wants to go some place else."

"My, what a pretty watch," said the man, admiring a small boy's new timepiece.

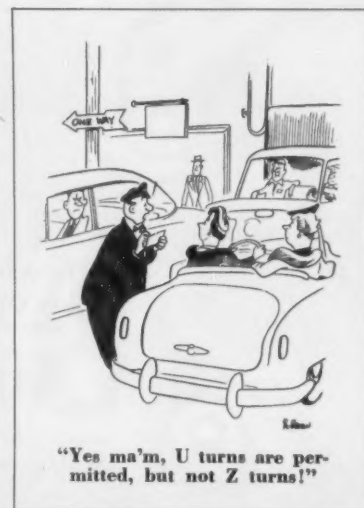
"Does it tell you the time?" "No, sir," replied the little fellow, "you gotta look at it."

"Tell me," the prospective tenant asked the pretty servant girl, "are you part of the apartments?"

"No, sir," she answered. "The apartments are to be let and I'm to be let alone."

Traffic officer to elderly lady when she bashed in the rear of the car ahead:

"Let's see your license." "Now, officer, that's sweet of you but who'd ever give me a license?"



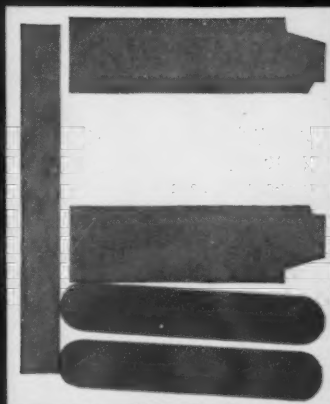
"Yes ma'm, U turns are permitted, but not Z turns!"

New Family of Engines or Older Engines: Side Sealing is Important to BOTH!

In C-9 the
Duomatic Expander
SEALS THE RAILS
against the groove,
thus preventing oil
escape due to
high vacuum



In 10-Up the Ramco
patented Spiro-Seal
DISHES UNDER
CONTRACTION, form-
ing a gentle seal to
prevent oil escape due
to high vacuum



When you say Ramco you get years ahead TOP and BOTTOM side sealing! With high vacuum oil control increasing in importance every day, you have proof again of Ramco's years ahead engineering leadership. Another proof you profit all-ways with Ramco. Ramco Corporation, St. Louis 8, Mo.

RAMCO

PISTON RINGS

for *FINEST* Get *UP* and *GO!*

It's the Cover that Counts!

Thermoid Fan Belts with Neoprene Covers take punishment as no ordinary belt can! Neoprene covers withstand high under-hood temperatures . . . resist abrasive road dirt and the oil and grease which ruin rubber. Thermoid's exclusive Pre-Stretching process prevents slipping, sagging and premature wear. Thermoid Fan Belts with Neoprene Covers are truly premium quality. Yet they sell at regular prices!



Thermoid Pre-Stretched Fan Belts with Neoprene Covers are a "horse of a different color".



Thermoid Company • Trenton, New Jersey

Brake Linings • Fan Belts • Radiator
Hose • Hydraulic Brake Parts and Fluid
• Car Mats • Clutch Facings • Thermoid
Precision Process Equipment